



Ex-Presidente



Presidente



Philip Poortmans, MD, PhD



3° Taller Internacional Multidisciplinario de Cáncer de Mama

&

1° Simposio de Cáncer Ginecológico

&

1° Taller de Planificación y Control de Calidad para Radiocirugía

"De la práctica a las bases teóricas"



Visión del radio-oncólogo: Cómo

individualizar la radioterapia en 2019?



No tengo ningún conflicto de interés.

Instituto Zunino

Fundación Marie Curie

Individualised patient care: *Myth or fact?*

1. Introduction

2. Challenges

3. ESTRO's & ECCO's point of view

4. Proposal for a roadmap

1. The journey of the patient

2. Multidisciplinarity

3. A bright future for Multidisciplinary Oncology

5. Final personal thoughts



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Fundación Marie Curie

Individualised patient care: *introduction*



ESTRO Vision 2020



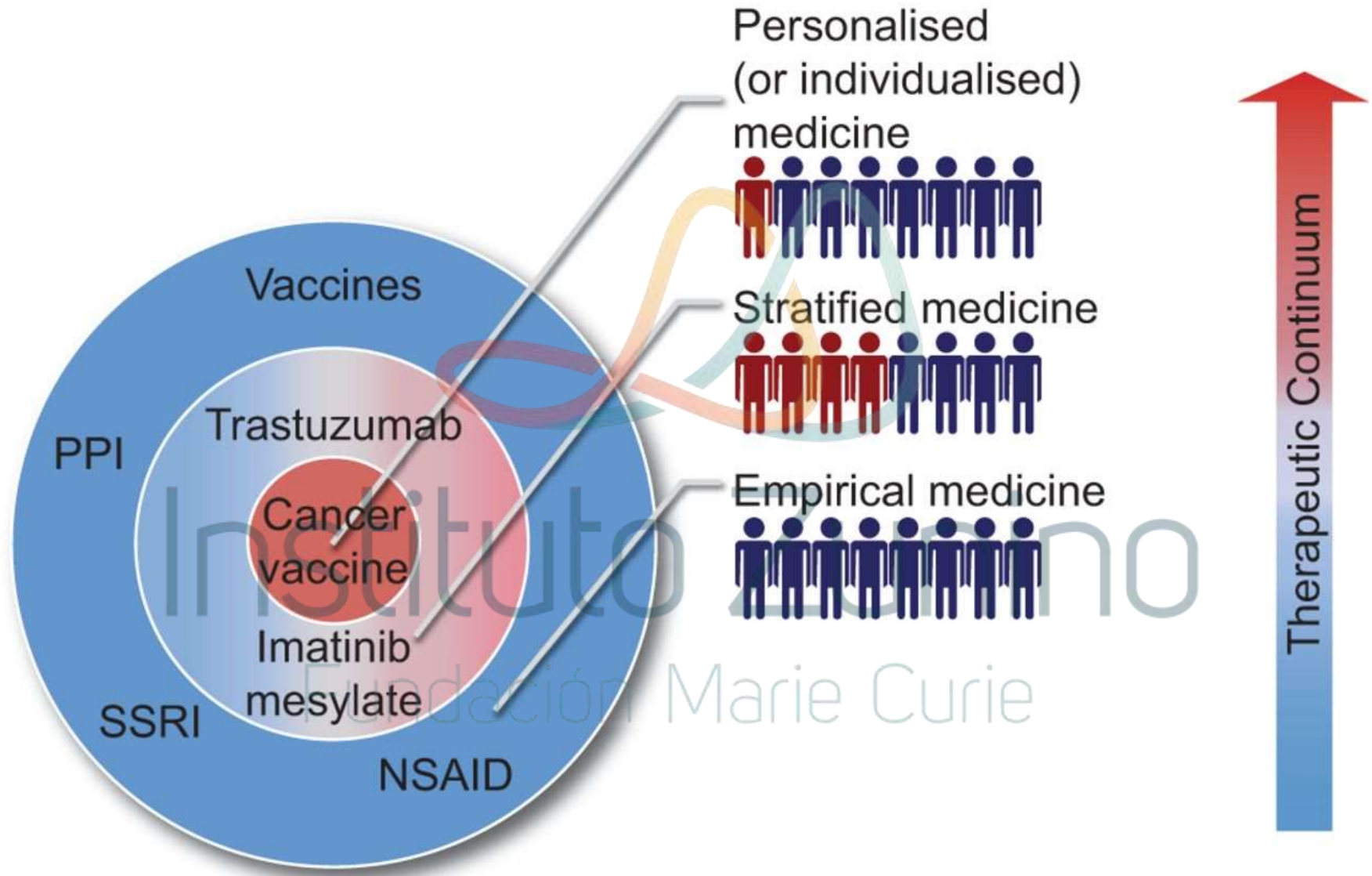
Every cancer patient in Europe will have access to state of the art radiation therapy, as part of a multidisciplinary approach where treatment is individualised for the specific patient's cancer, taking account of the patient's personal circumstances.

A mission of connection

A large, light blue oval shape that serves as a background for the mission statement text. It is centered on the slide and contains the text in a bold, black, sans-serif font. Behind the oval, there is a faint, large watermark of the text "Istituto Zucchi" and "Fundación Marie Curie".

**“To improve outcomes
for all cancer patients
in Europe through
multidisciplinary”**

Individualised patient care: *introduction*



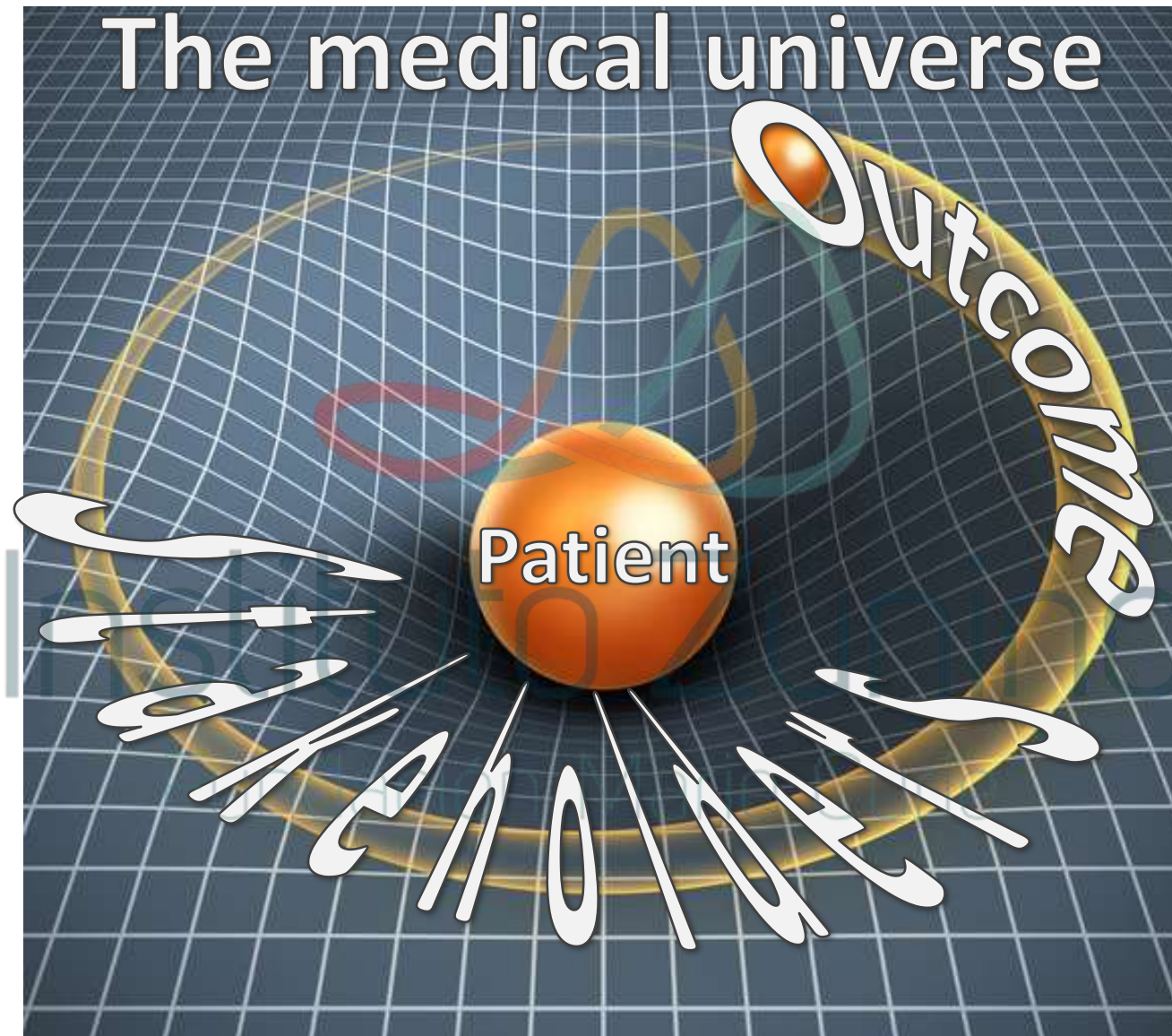
Individualised patient care: *introduction*



Individualised patient care: *introduction*



Individualised patient care: *introduction*



Individualised patient care: *introduction*

Patient:

- Physical
- Social, cultural, emotional, spiritual & *“experience/beliefs”*
- Relatives and others involved

Centric:

- Single shells – directly with all stakeholders
- Multiple shells – directly only with health care providers

Approach: Fundación Marie Curie

- Unidirectional
- Bidirectional

Individualised patient care: *introduction*

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Individualised patient care: *introduction*



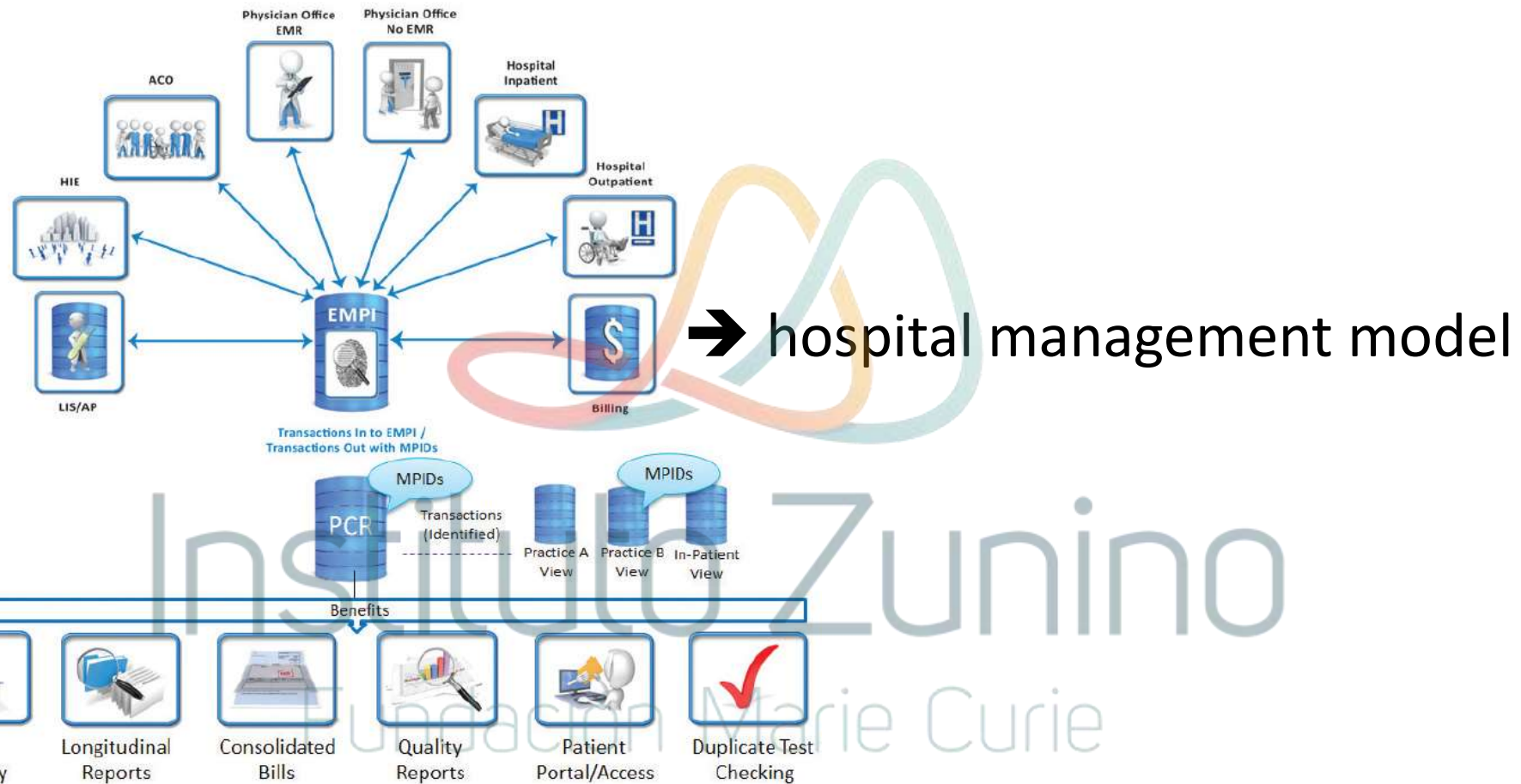
➔ general model/picture

Hospitalisation:
Meta database



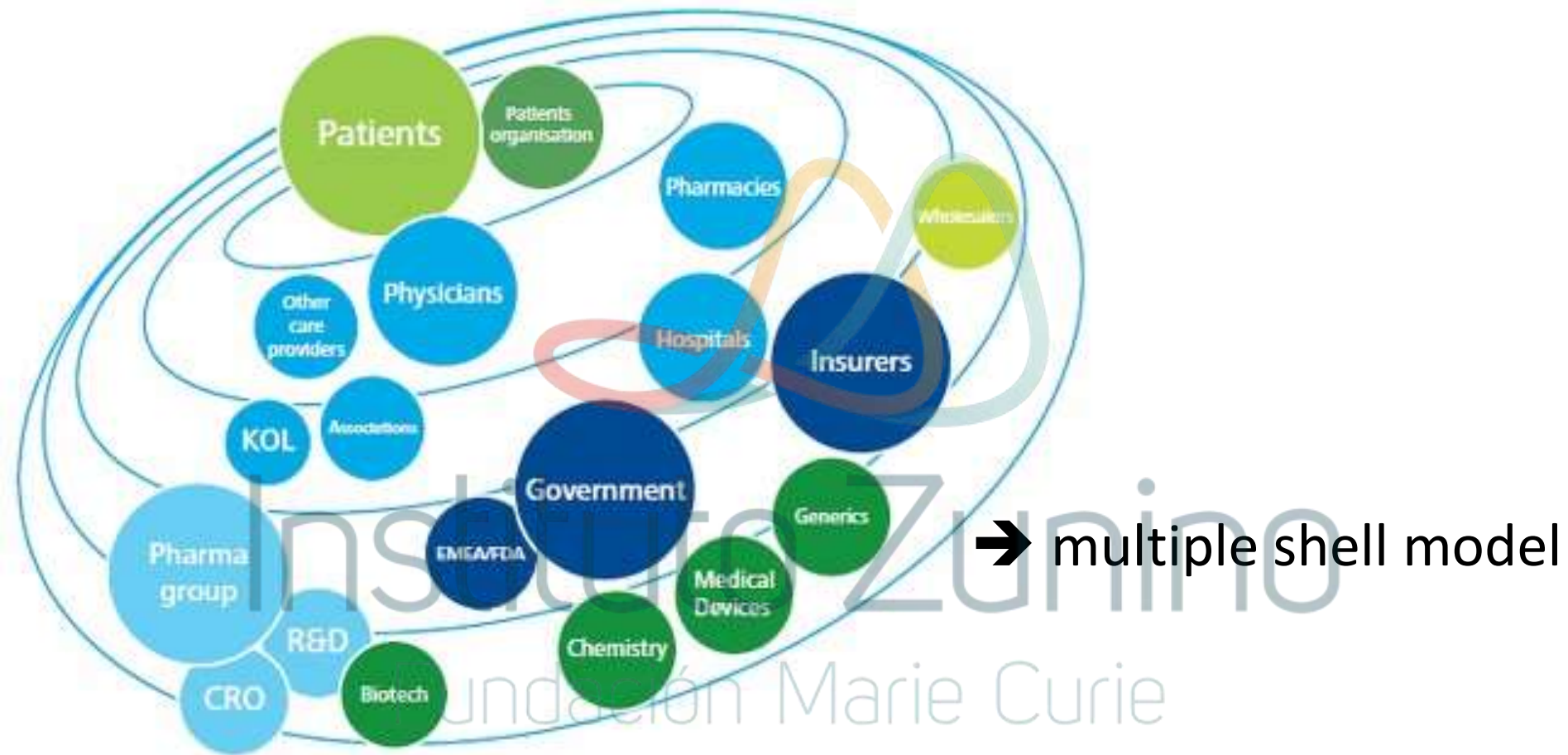
Google image search “Patient centric approach” – 1st level

Individualised patient care: *introduction*



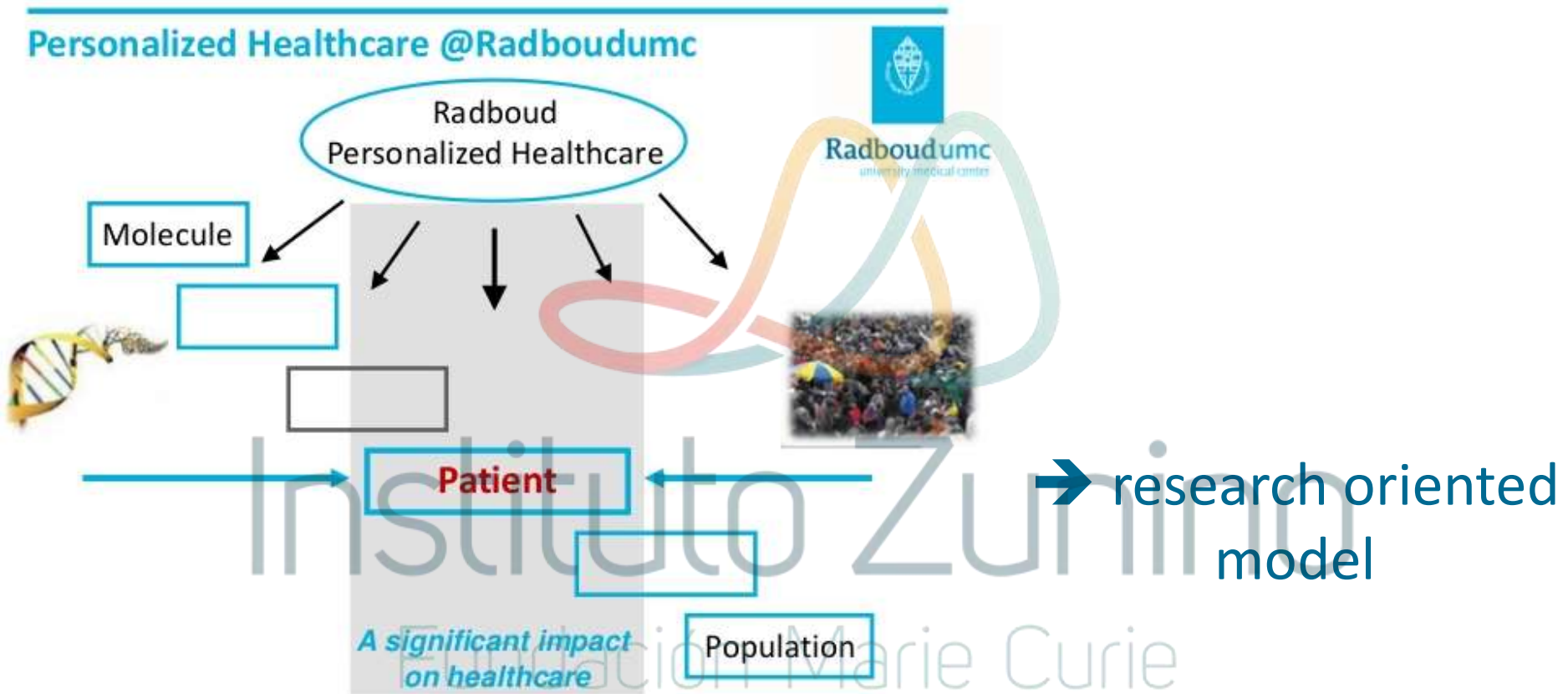
Google image search "Patient centric approach" 2nd level

Individualised patient care: *introduction*



Google image search “Patient centric approach” 2nd level

Individualised patient care: *introduction*



Google image search “Patient centric approach” 2nd level

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Individualised patient care: *challenges*

Lancet Oncol 2015; 16: 1153-86

The Lancet Oncology Commission

Commission

Expanding global access to radiotherapy

Rifat Atun, David A Jaffray, Michael B Barton, Freddie Bray, Michael Baumann, Bhadrasain V, Yolande Lievens, Tracey Y M Lui, Michael Milosevic, Brian O'Sullivan, Danielle L Rodin, Eduardo Zubizarreta, Mary Gospodarowicz

...ing Yap,



Lancet Oncol 2015;16:1193-224.

Lancet Oncology Commission

Global cancer surgery cancer surgery

safe, affordable, and timely



Richard Sullivan
Anna Durr
Ham
Swag
Shailesh
Dehannati

erson, Riccardo Audisio, Philippe Autier, Ajay Aggarwal, Charles Balch, Murray Brennan,
Kenneth Fleming, Serigne Magueye Gueye, Lars Hagander, Cristian A Herrera,
reimer, Jia-fu Ji, T Peter Kingham, Jonathan Liberman, Andrew J M Leather, John G Meara,
ny, Sherif Omar, Groesbeck P Parham, C S Pramesh, Robert Riviello, Danielle Rodin, Luiz Santini,
Robert Thomas, Audrey T Tsunoda, Cornelis van de Velde, Umberto Veronesi,
Vijaykumar, David Watters, Shan Wang, Yi-Long Wu, Moez Zeiton, Arnie Purushotham

LACK OF ACCESS - INEQUALITY

Individualised patient care: *challenges*

**ESTRO SCHOOL OF
RADIOTHERAPY
AND ONCOLOGY**
WWW.ESTRO.ORG

**POSTGRADUATE COURSES
IN EUROPE**

- BASIC CLINICAL RADIOBIOLOGY**
27 February - 2 March 2016 | Budapest, Hungary
- DOSE MODELLING AND VERIFICATION
FOR EXTERNAL BEAM RADIOTHERAPY**
6 - 10 March 2016 | Utrecht, The Netherlands
- MODERN BRACHYTHERAPY
TECHNIQUES**
13 - 16 March 2016 | Roemenia
- PARTICLE THERAPY**
14 - 18 March 2016
- IMRT AND
TECH**

**ADVANCED SKILLS IN
RADIOTHERAPY**
19 - 23 June 2016

**MULTI-
HEAT**

**ADVANCED SKILLS IN
RADIOTHERAPY**
19 - 23 June 2016

**POSTGRADUATE COURSES
IN EUROPE**

- IMMAGE-GUIDED CERVIX CANCER
RADIOTHERAPY - WITH A SPECIAL
FOCUS ON ADAPTIVE BRACHYTHERAPY**
4 - 6 April 2016 | Toronto, Canada
- MULTIDISCIPLINARY MANAGEMENT OF
BREAST CANCER**
20 - 23 May 2016 | Tokyo, Japan
- MULTIDISCIPLINARY MANAGEMENT OF
LUNG CANCER**
26 - 28 June 2016 | Moscow, Russia
- BASIC CLINICAL RADIOBIOLOGY**
6 - 10 July 2016 | Chengdu, China
- EVIDENCE BASED RADIATION
ONCOLOGY**
How to evaluate the scientific evidence and
apply it to daily practice
20 - 25 November 2016 | Sydney, Australia
- PAEDIATRIC RADIATION ONCOLOGY**
3 - 5 December 2016 | Bangkok, Thailand
- ADVANCED TECHNOLOGIES**
6 - 10 December 2016 | Pune, India

LACK OF EDUCATION / CME

Individualised patient care: *challenges*



Individualised patient care: *challenges*

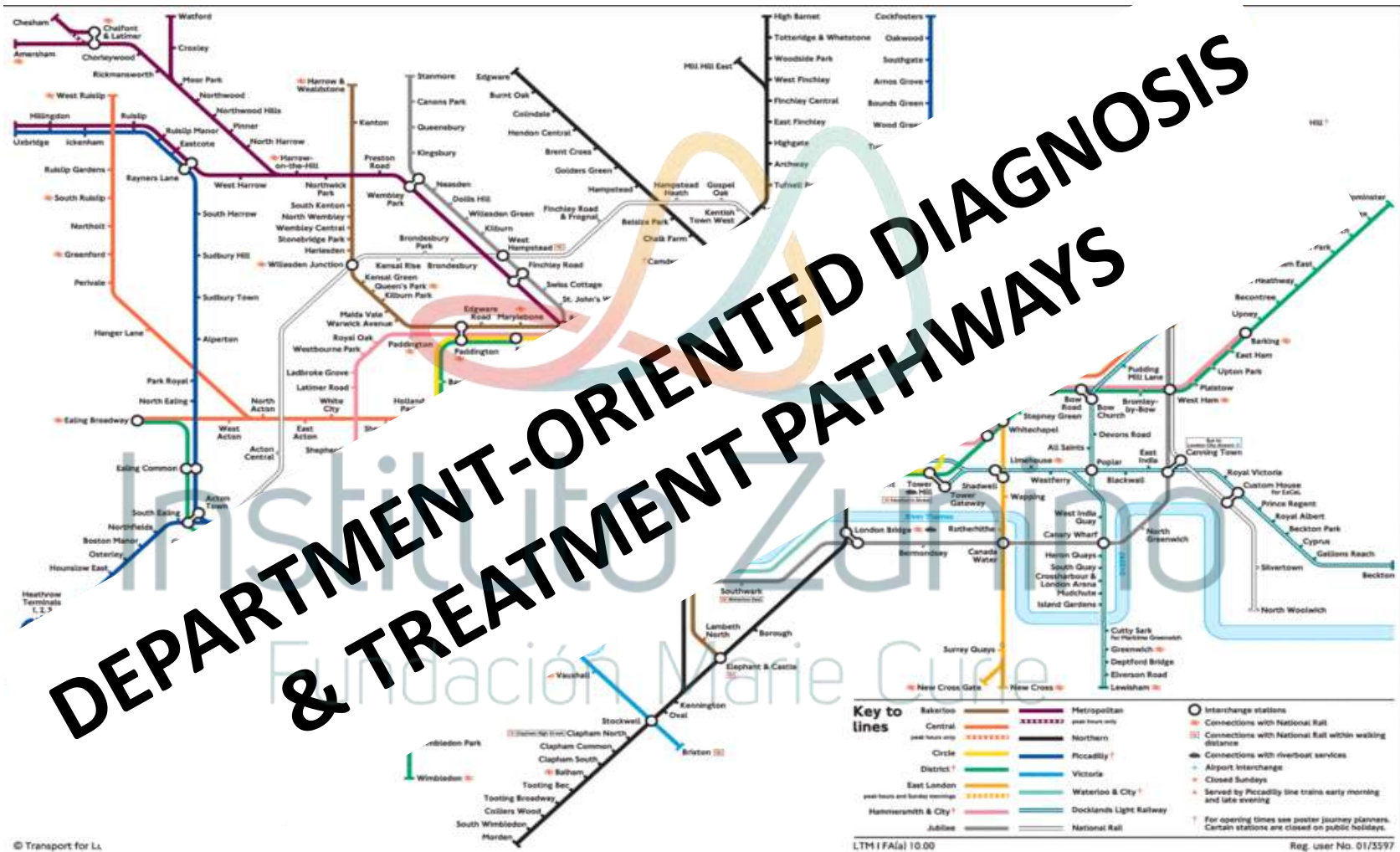


From signs and symptoms



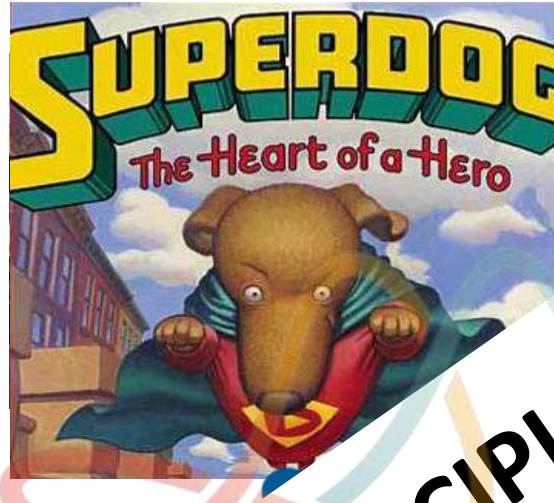
Individualised patient care: *challenges*

From signs and symptoms...



... to treatment

Individualised patient care: *challenges*



LACK OF MULTIDISCIPLINARITY



Individualised patient care: *challenges*

Marketing Your Radiation Oncology Center

How to Grow Your Business

by Alison Chernes

**MARKETING BEYOND
DISSEMINATION OF SCIENCE &
EVIDENCE**

Specialty

Urology
Medical
ENT
Family
Surgery

Percentage of Patient Mix

65%
10%
15%
5%
5%

Individualised patient care: *challenges*

Some other examples (not listed)

- Varying reimbursement for robotic machine
- Routine use for many indications
- Use of JABR/SRS
- A. in surgery (OPS/robot) & medical oncology

**REIMBURSEMENT DRIVEN USE VS.
GUIDELINE BASED REIMBURSEMENT**

Individualised patient care: *challenges*

Manejo individualizado de la axila: *RT*

Dinamarca: seguir sus propios resultados

Published Ahead of Print on November 23, 2015 as 10.1200/JCO.2015.63.6456
The latest version is at <http://jco.ascopubs.org/cgi/doi/10.1200/JCO.2015.63.6456>

JOURNAL OF CLINICAL ONCOLOGY

ORIGINAL REPORT

Instituto Zunino

DBCG-IMN: A Population-Based Cohort Study on the Effect
of Internal Mammary Node Irradiation in Early
Node-Positive Breast Cancer

Lise Bech Jellesmark Thorsen, Birgitte Vrou Offeren, Hella Danø, Martin Berg, Ingelise Jensen,
Anders Navrsted Pedersen, Sune Jürg Zimmermann, Hans-Jürgen Brodersen, Marie Overgaard, and
Jens Overgaard

Individualised patient care: *challenges*

Manejo individualizado de la axila: *RT*

Francia: una interpretación maximalista



Individualised patient care: *challenges*

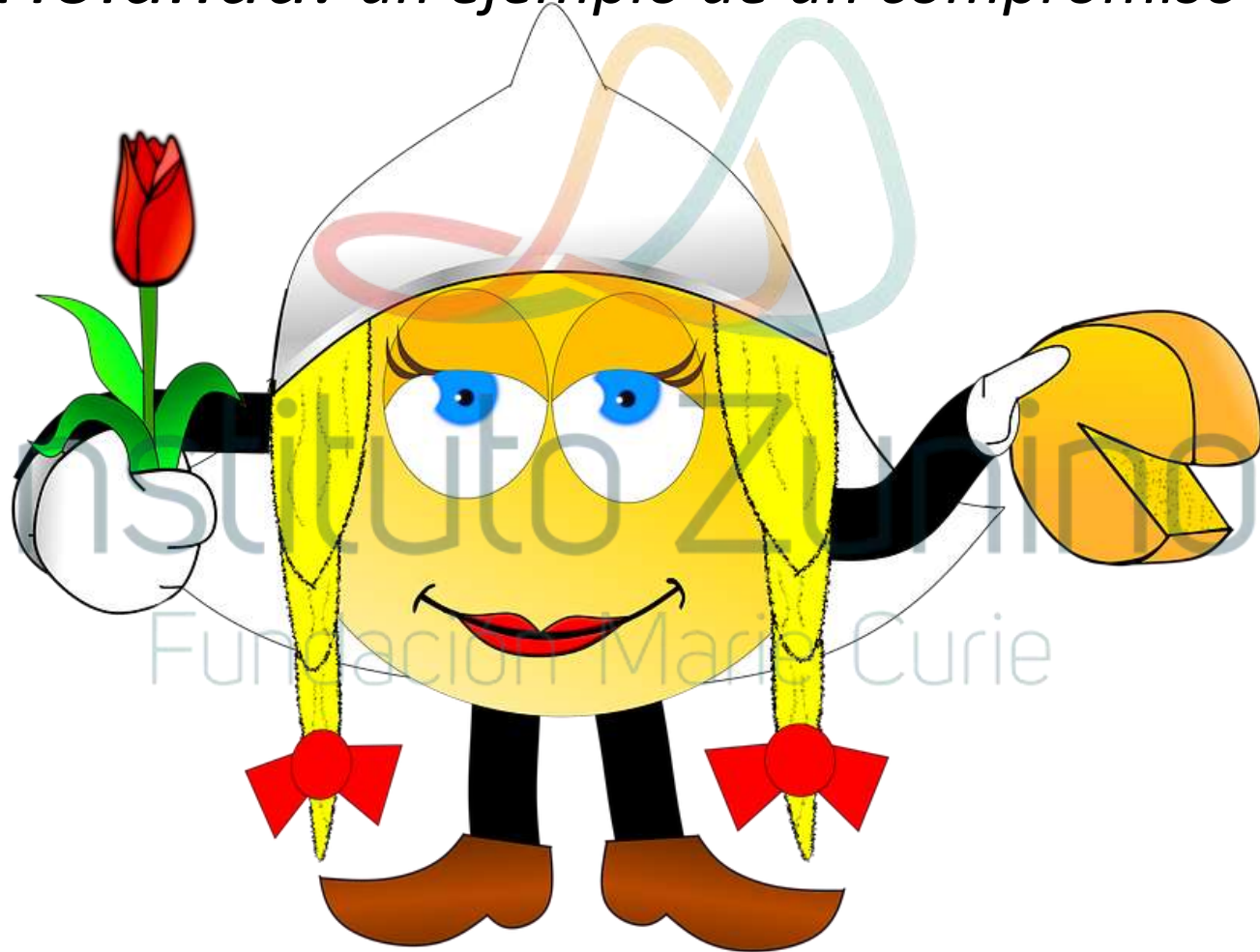
Manejo individualizado de la axila: *RT*
Inglaterra: una interpretación minimalista



Individualised patient care: *challenges*

Manejo individualizado de la axila: *RT*

Holanda: un ejemplo de un compromiso



Individualised patient care: *challenges*

Manejo individualizado de la axila: *RT*

Otros países: la confusión gera?



Individualised patient care: *challenges*

Manejo individualizado de la axila: *RT*



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Fundación Marie Curie

Individualised patient care: *challenges*

Manejo individualizado de la axila: *RT*

→ *acuerdos de consenso*

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de Calidad para Radiocirugía

"De la práctica a las bases teóricas"



Vienen escucharme!

*El manejo de los ganglios axilares: Una
batalla entre la cirugía y la radioterapia?*

Individualised patient care: *Myth or fact?*

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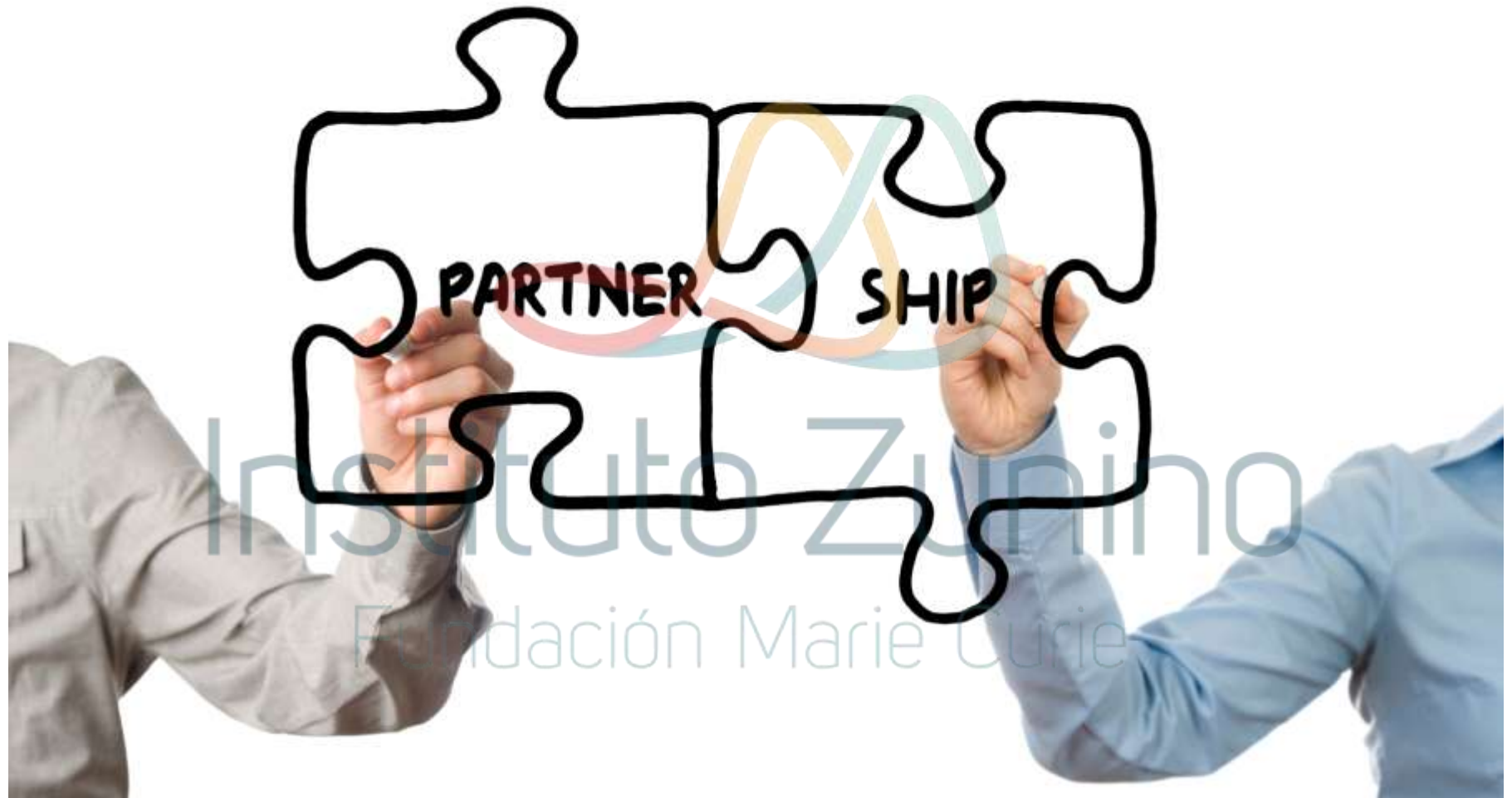
3. A bright future for Multidisciplinary Oncology

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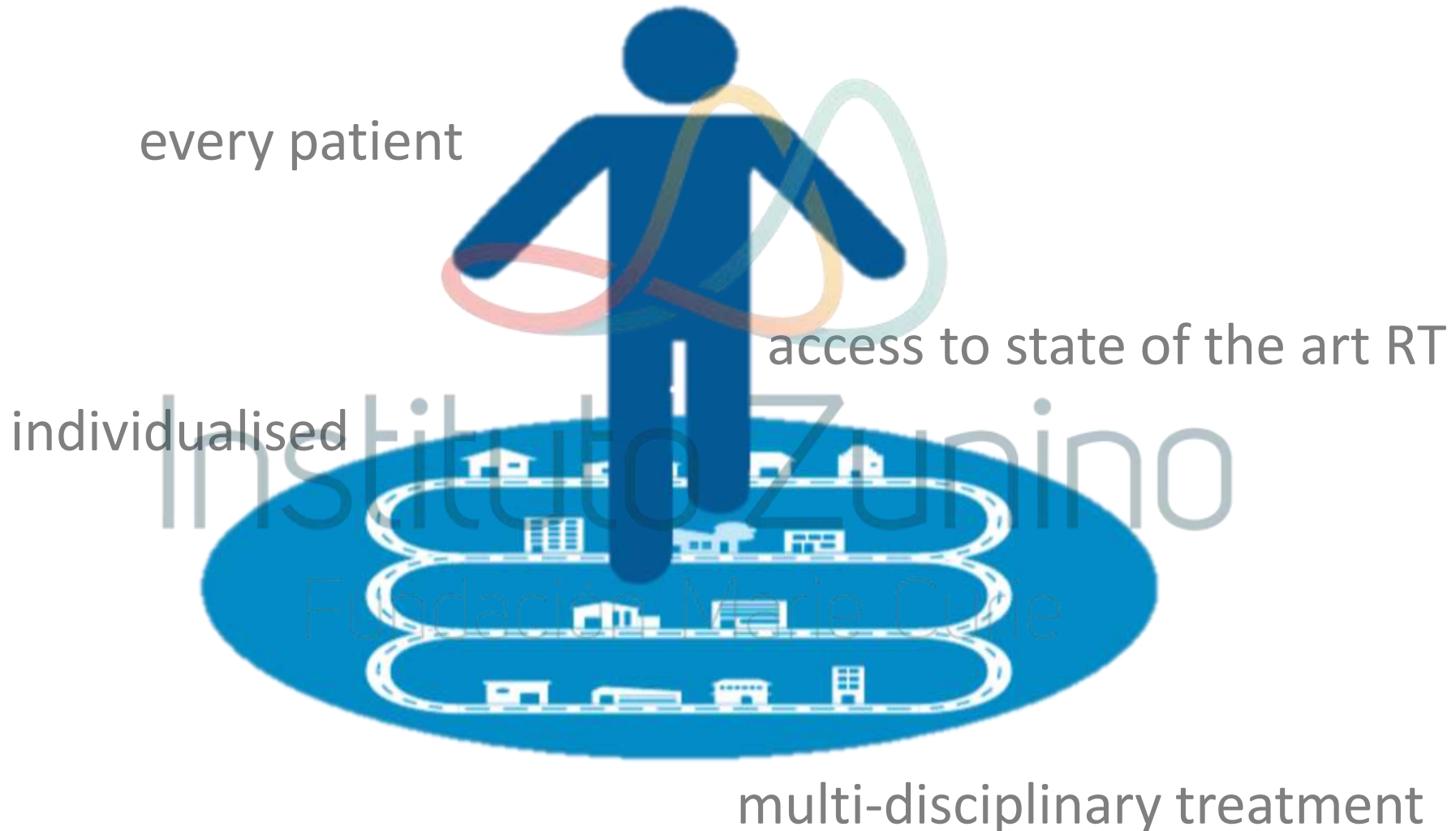
Fundación Marie Curie

Individualised patient care: *ESTRO's & ECCO's PoV*



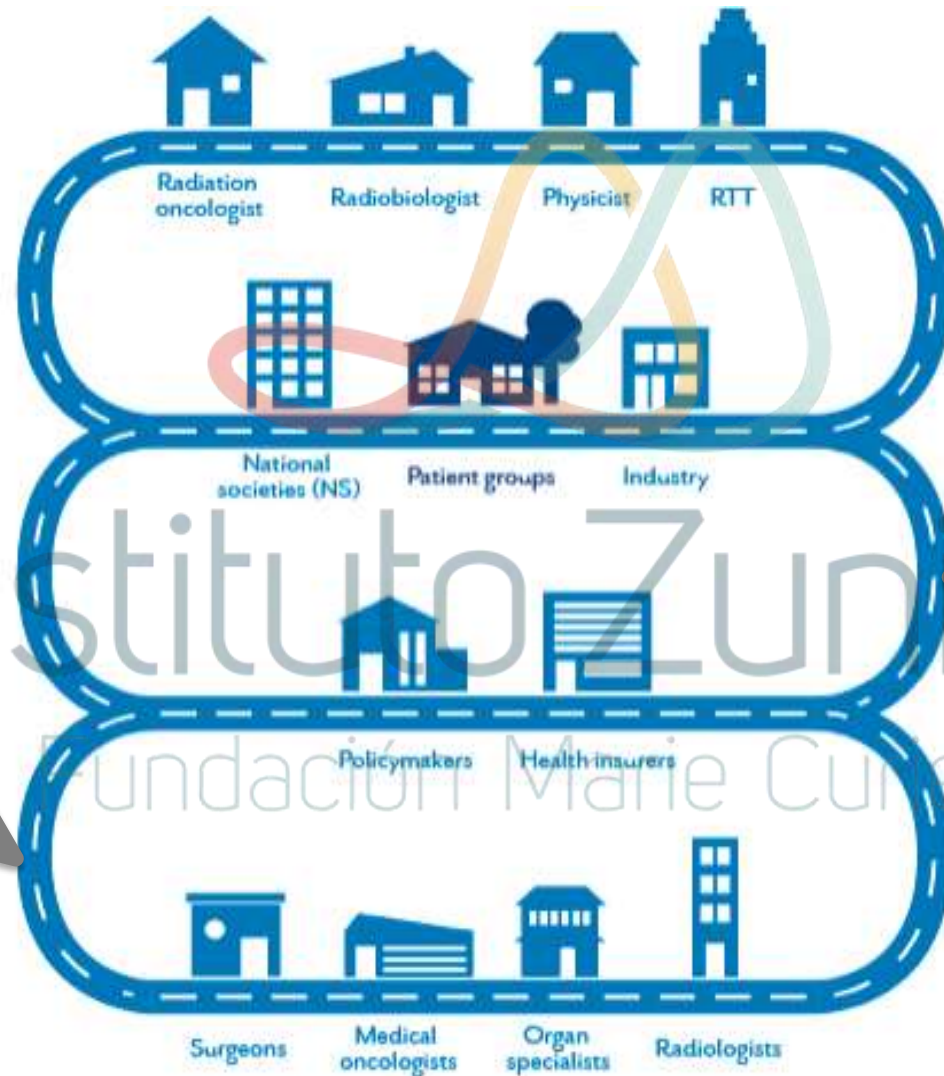
Individualised patient care: *ESTRO's & ECCO's PoV*

ESTRO vision: key elements



Individualised patient care: *ESTRO's & ECCO's PoV*

Stakeholders: complete framework



For equal partnership

Critical mass to influence

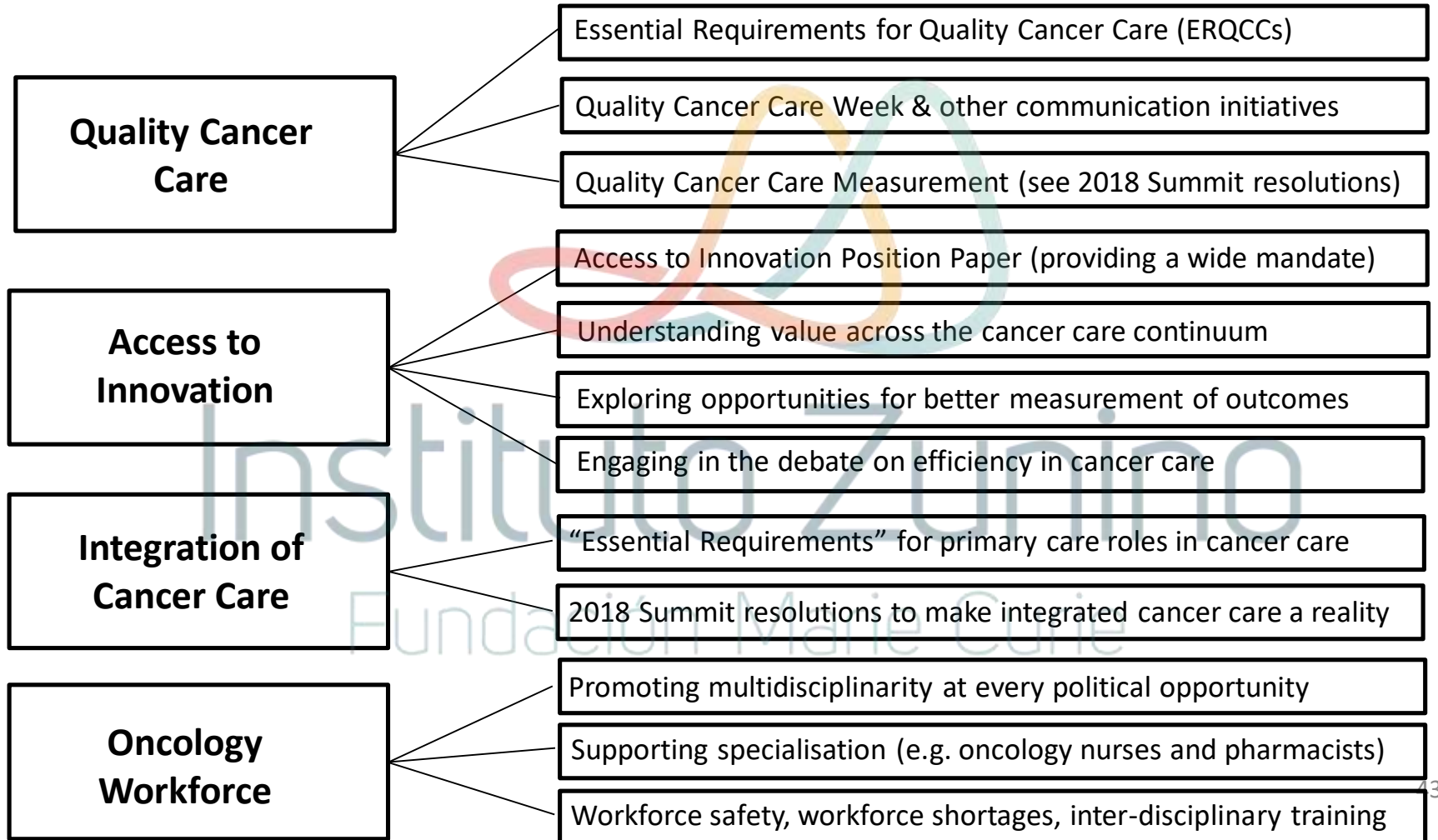
Individualised patient care: *ESTRO's & ECCO's PoV*

Stakeholders: the patient in the center

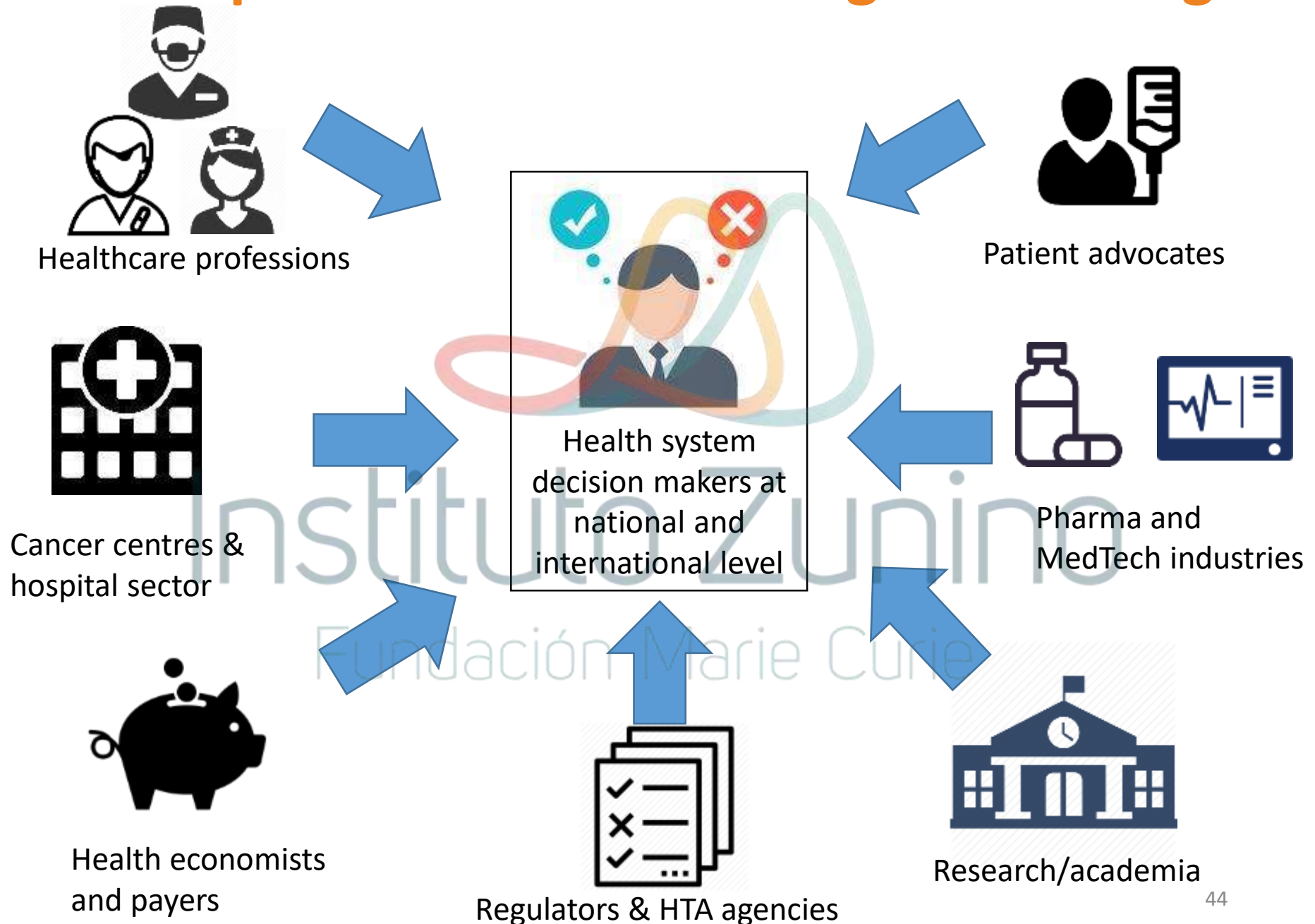


Individualised patient care: *ESTRO's & ECCO's PoV*

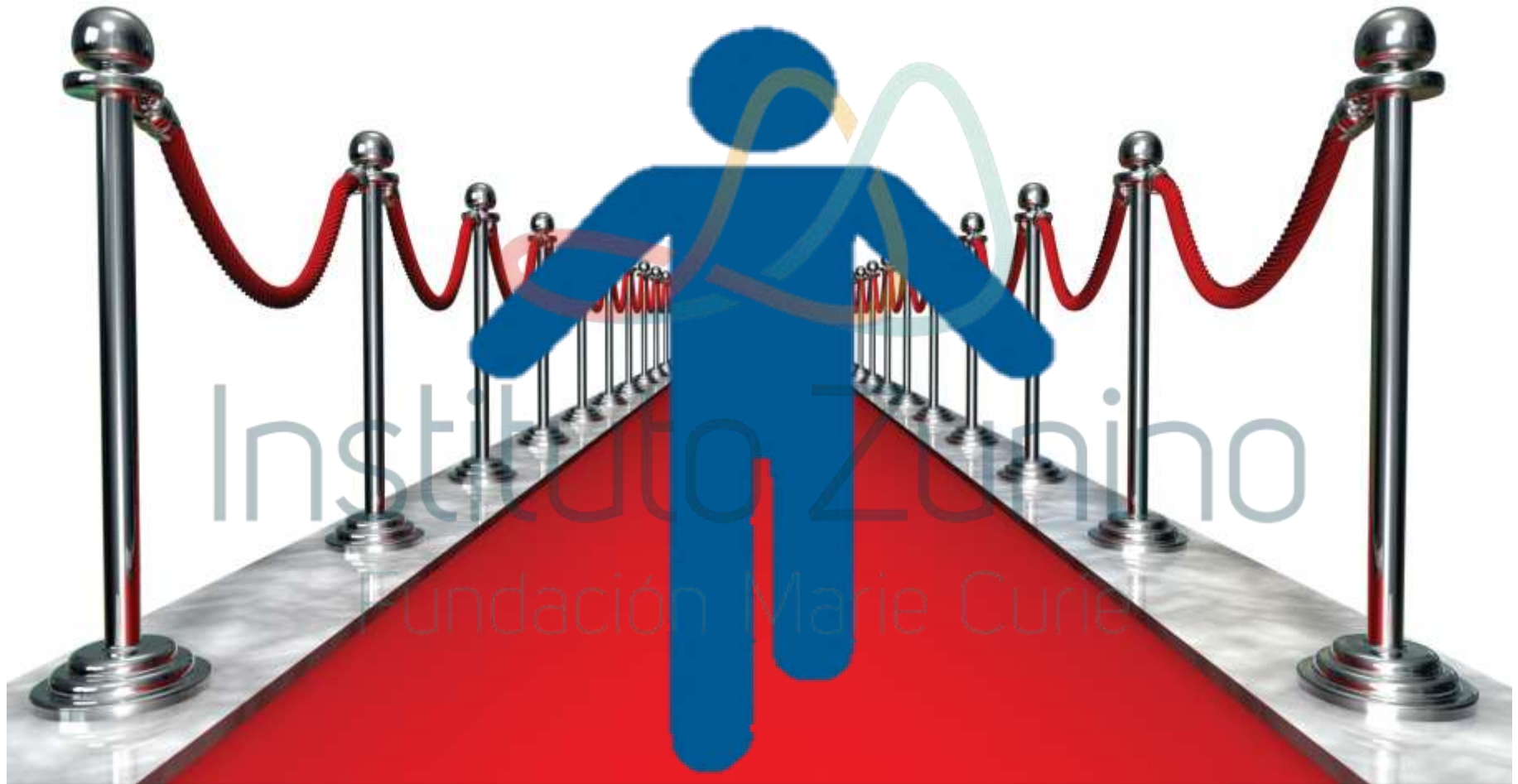
ECCO: unifying oncopolicy to reunite



The importance of connecting our messages



Individualised patient care: *ESTRO's & ECCO's PoV*



Individualised patient care: *Myth or fact?*

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Individualised patient care: *patient's journey*

CAN A JOURNEY MAP HELP IMPROVE THE PATIENT EXPERIENCE?



Individualised patient care: *patient's journey*

Sign, symptom
or screening

Waiting...
Patient delay

Doesn't improve
→ *care seeking*

Gets worse
→ *emergency*

Appointment
→ *3 weeks later*

GP
→ *referral*

General ER
→ *tests + symptom
therapy*

Results via GP
→ *1 week later*

Inconclusive
→ *referral*

Specialist
→ *MTB*

Results
→ *further exams*

Specialist
→ *tests*

Individualised patient care: *patient's journey*

Information, access & education
→ shortening from weeks to days

Education, access
→ shortening from weeks to days

Dedicated one-day ambulatory clinics
→ shortening from weeks to days

Dedicated one-day ambulatory clinics
→ included in above

Individualised patient care: *patient's journey*

Overall reduction from 2-3 months to 1-2 weeks

- Faster diagnosis and start treatment
- Less psychological burden
- Shorter period of symptoms
- Less double and inappropriate tests
- Less economical losses

And this exists already!

Individualised patient care: *patient's journey*



BUT!

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Individualised patient care: *patient's journey*



The journey just started...

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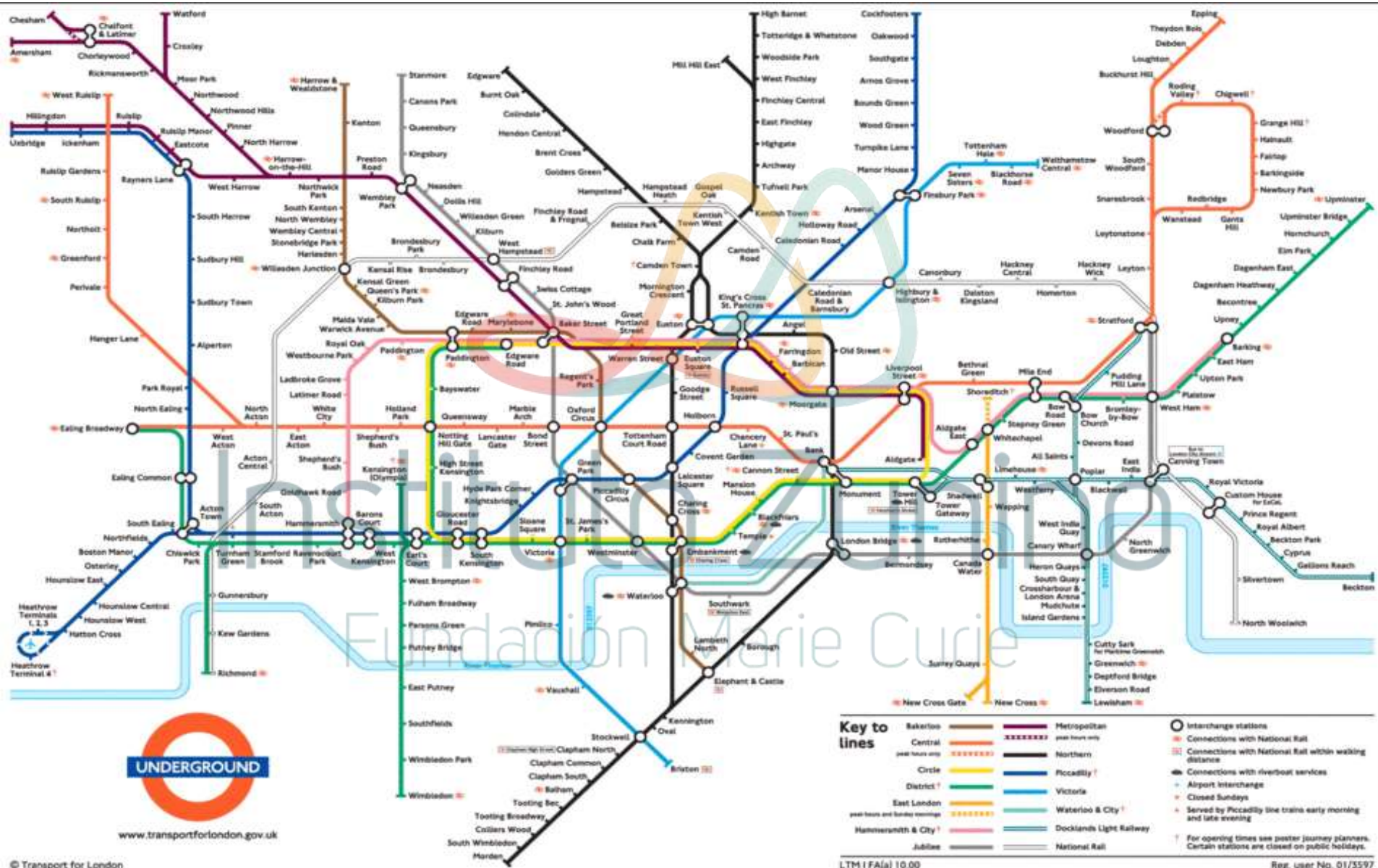
Individualised patient care: *patient's journey*



Individualised patient care: *patient's journey*



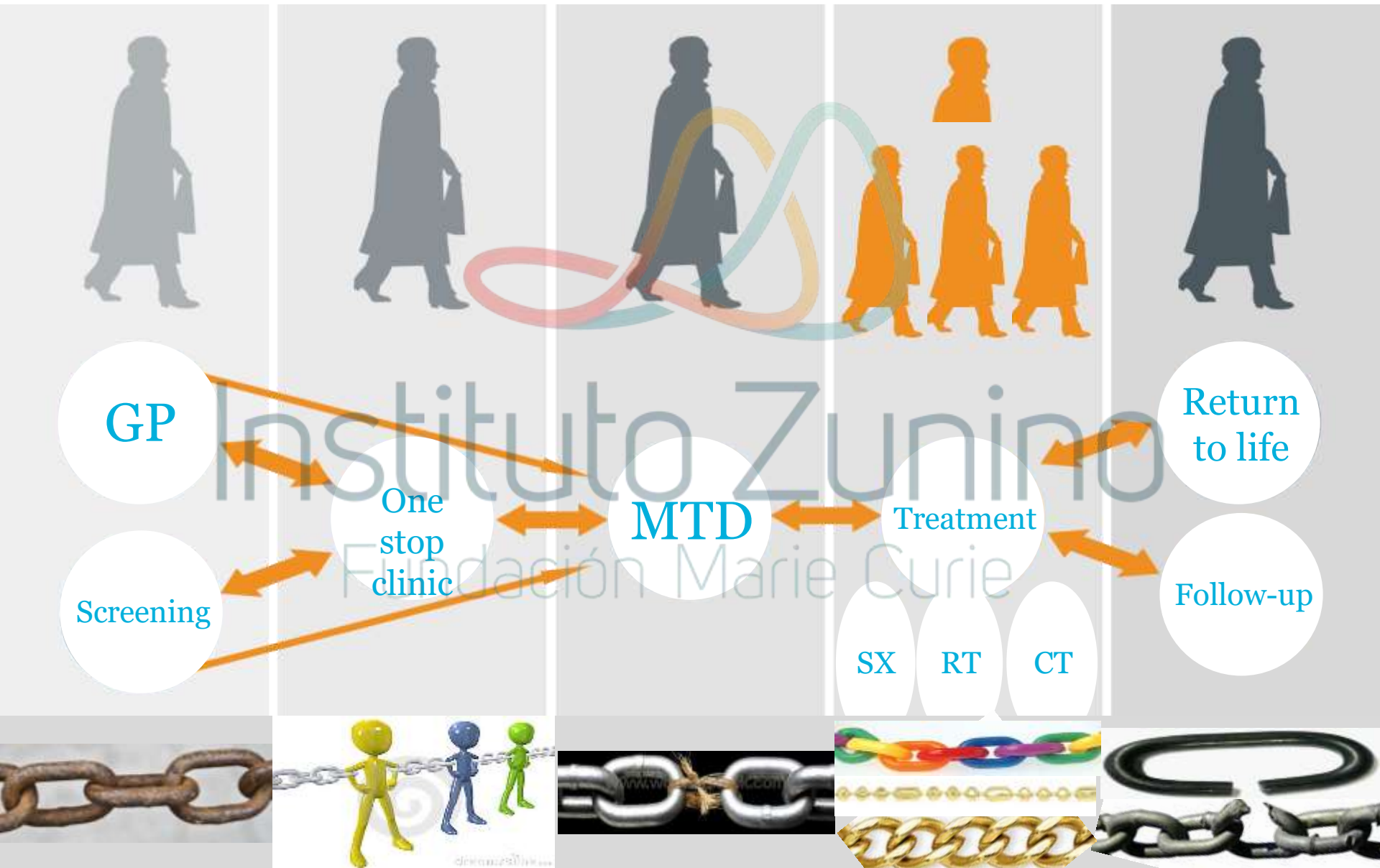
Individualised patient care: *patient's journey*



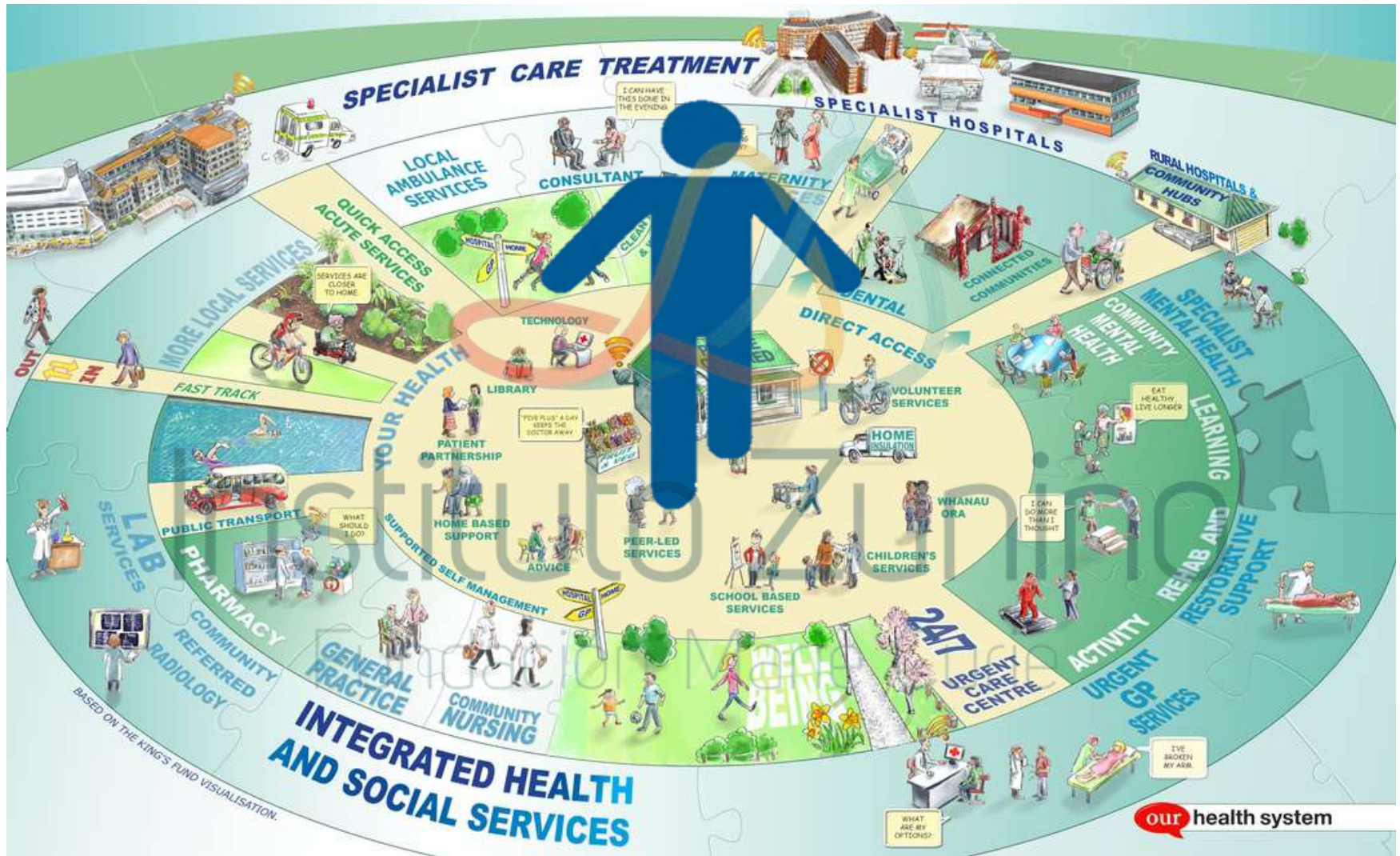
Individualised patient care: *patient's journey*



Individualised patient care: *patient's journey*



Individualised patient care: *patient's journey*



Individualised patient care: *patient's journey*

To do:

Organisation:

- *Patient oriented*
- *Disease oriented*

Infrastructure:

- *Per treatment path*
- *Per department*

Finances:

- *Per disease = basis*
- *Department for support*

Not to do:

Organisation:

- *Department oriented*

Infrastructure:

- *Scattered*

Finances:

- *Per department = basis*



Individualised patient care: *Myth or fact?*

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Individualised patient care: *multidisciplinary*



To do:

European Partnership Action Against Cancer consensus group (EPAAC): Policy statement on multidisciplinary cancer care.

Eur J Cancer. 2014 Feb;50(3):475-80.

Not to do:

The current and future role of the medical oncologist in the professional care for cancer patients: a position paper by the European Society for Medical Oncology (ESMO).

Ann Oncol. 2014 Jan;25(1):9-15.

Still a long way to go to achieve multidisciplinary for the benefit of patients: commentary on the ESMO position paper (Annals Oncology Jan;25(1): 9-15, 2014)

V. Valentini¹, P-A. Abrahamsson², S.K. Aranda³, A. Astier⁴, R. A. Audisio⁵, M. Boniol⁶, L. Bonomo⁷, A. Brunelli⁸, B. Bultz⁹, A. Chiti¹⁰, F. De Lorenzo¹¹, J.G. Eriksen¹², V. Goh¹³, M. K. Gospodarowicz¹⁴, L. Grassi¹⁵, J. Kelly¹⁶, R. D. Kortmann¹⁷, T. Kutluk¹⁸, A. Plate¹⁹, G. Poston²⁰, T. Saarto²¹, R. Soffietti²², A. Torresin²³, W. H. van Harten²⁴, J.F. Verzijlbergen²⁵, C. von Kalle²⁶, P. Poortmans^{27,*}

Individualised patient care: *multidisciplinarity*

Better local treatment adds to the effects of systemic therapy on local recurrence and on breast cancer mortality.

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Individualised patient care: *multidisciplinarity*

RT & survival:

→ **X** interaction with surgery and systemic treatment

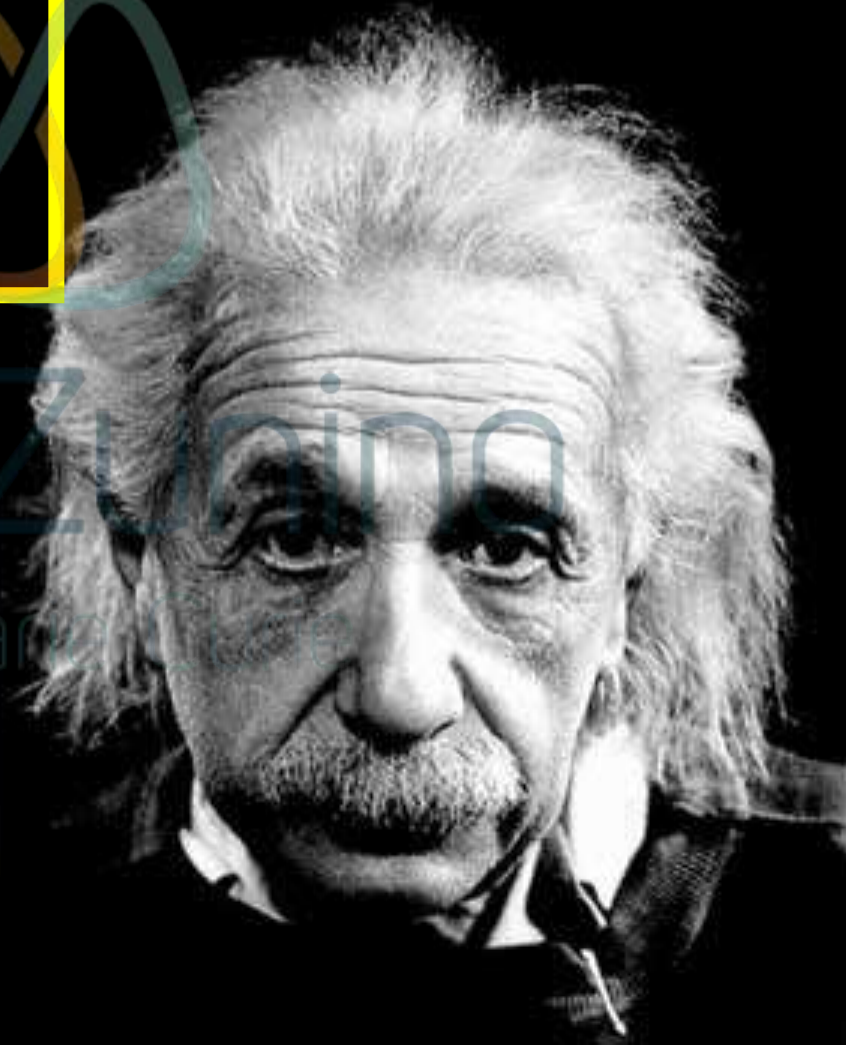
↓ risk for death < M+ → ↑ importance of LC

→ earlier stage BC

→ improved systemic therapy

Everything should be made
as simple as possible,
but not simpler.

Albert Einstein

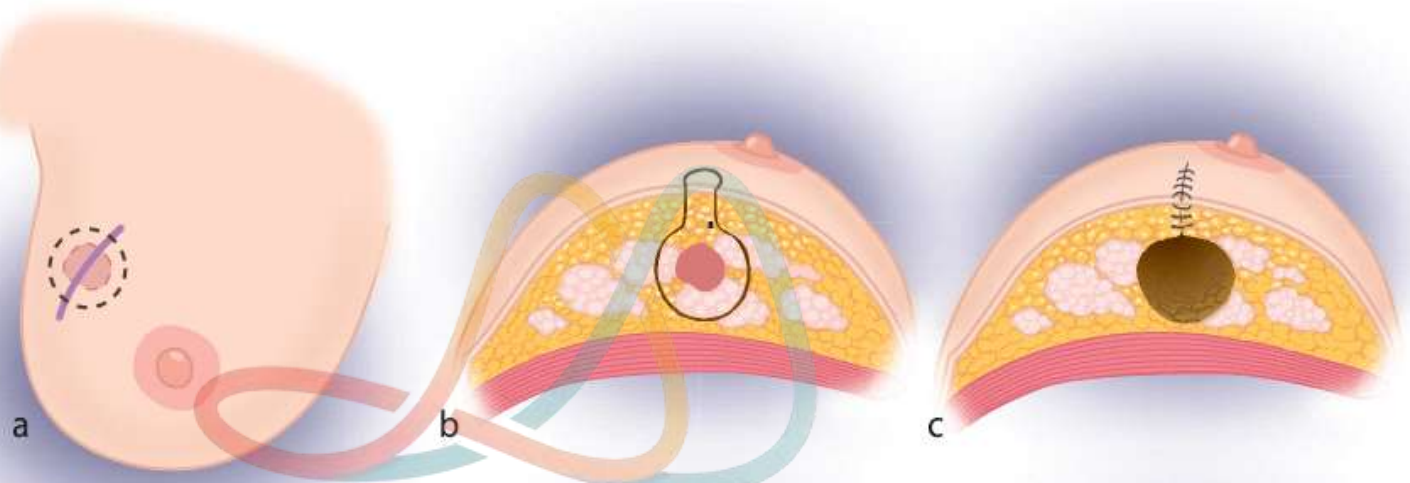


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Individualised patient care: *multidisciplinary*

Past



Present

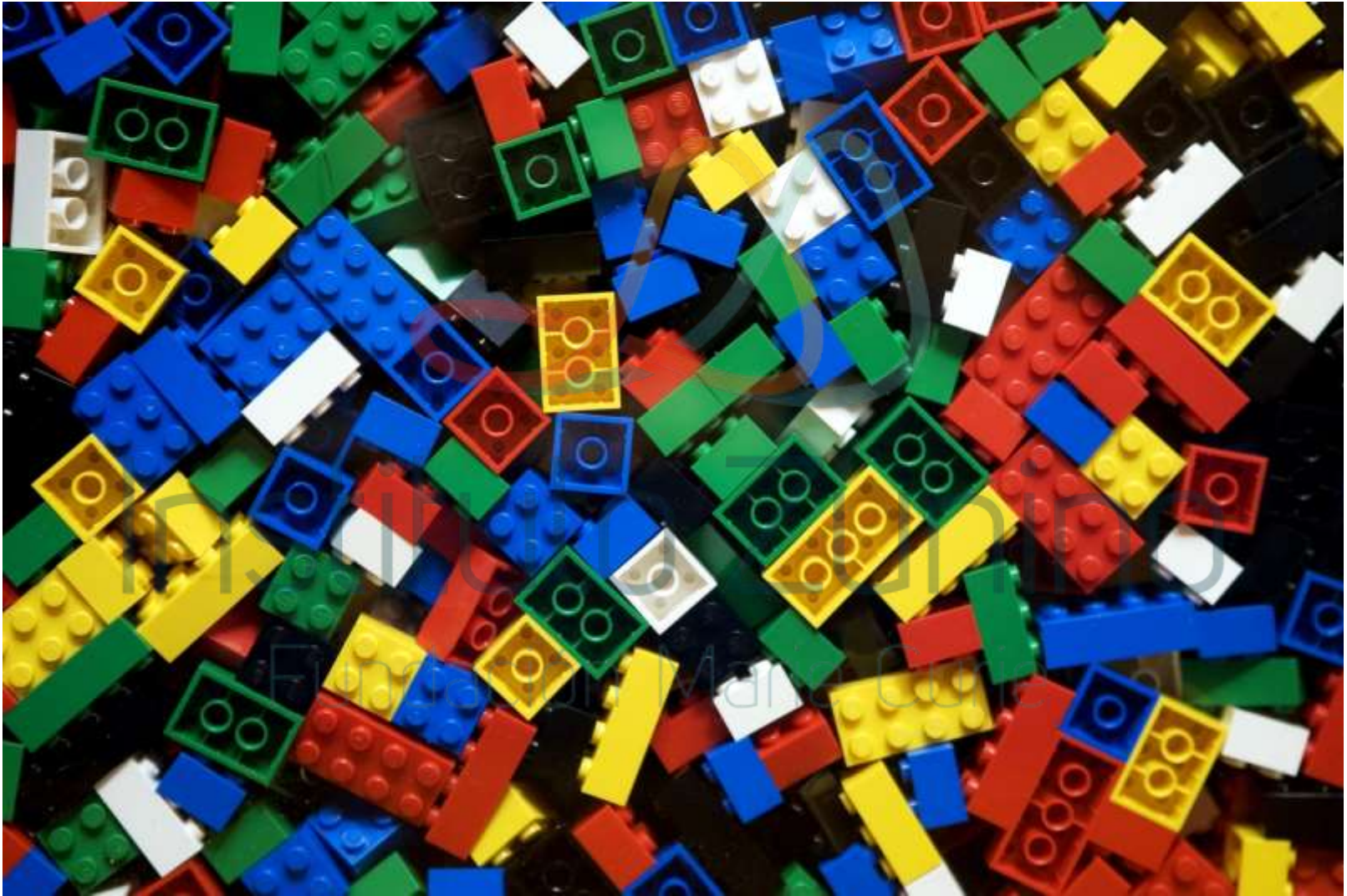


Individualised patient care: *multidisciplinary*



Instytut Zmiany
Funkcyjnej i Wzrostu

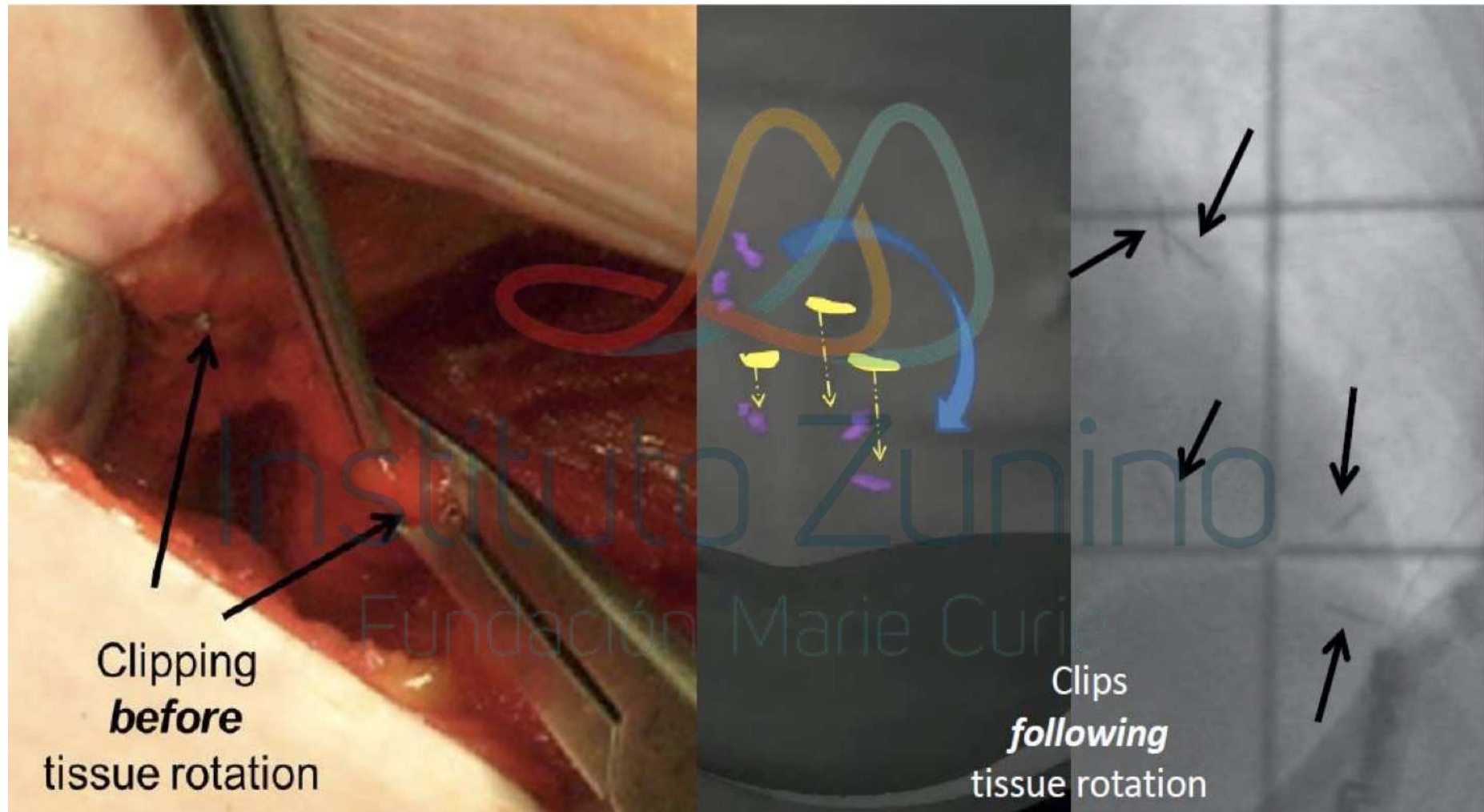
Individualised patient care: *multidisciplinary*



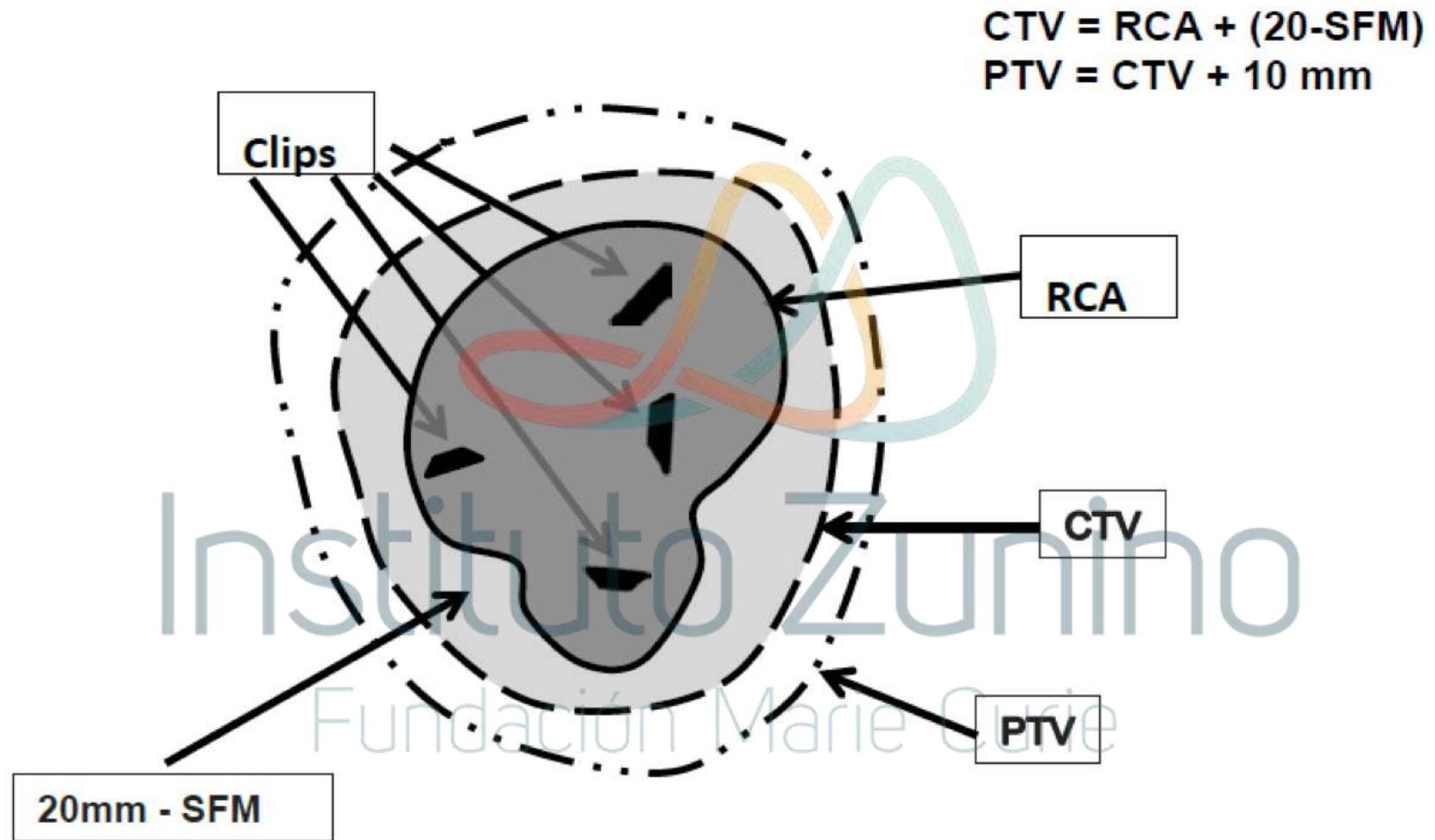
Individualised patient care: *multidisciplinary*



Individualised patient care: *multidisciplinary*



Individualised patient care: *multidisciplinarity*



RCA: relevant clipped area

SFM: Smallest surgical Free Margin

Individualised patient care: *multidisciplinary*

Future work

- Involvement of surgeons:

- Optimal positioning of clips
- Information on the position of tumor ↔ scar

- Involvement of pathologist:

- 3D information on resection margins

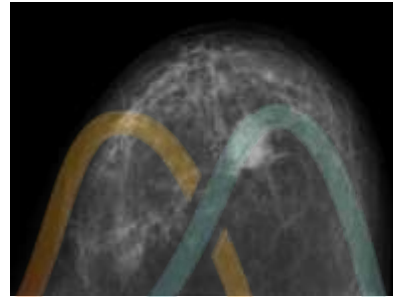
- Involvement of radiologists:

- Use of MRI (usually not available in RT position)

- Involvement of radiation oncologist:

- Pre-operative localization of tumour:

- physical examination
- pre-operative planning-CT scan





My hands

Surgeon's hands

12 1 2012

Individualised patient care: *Myth or fact?*

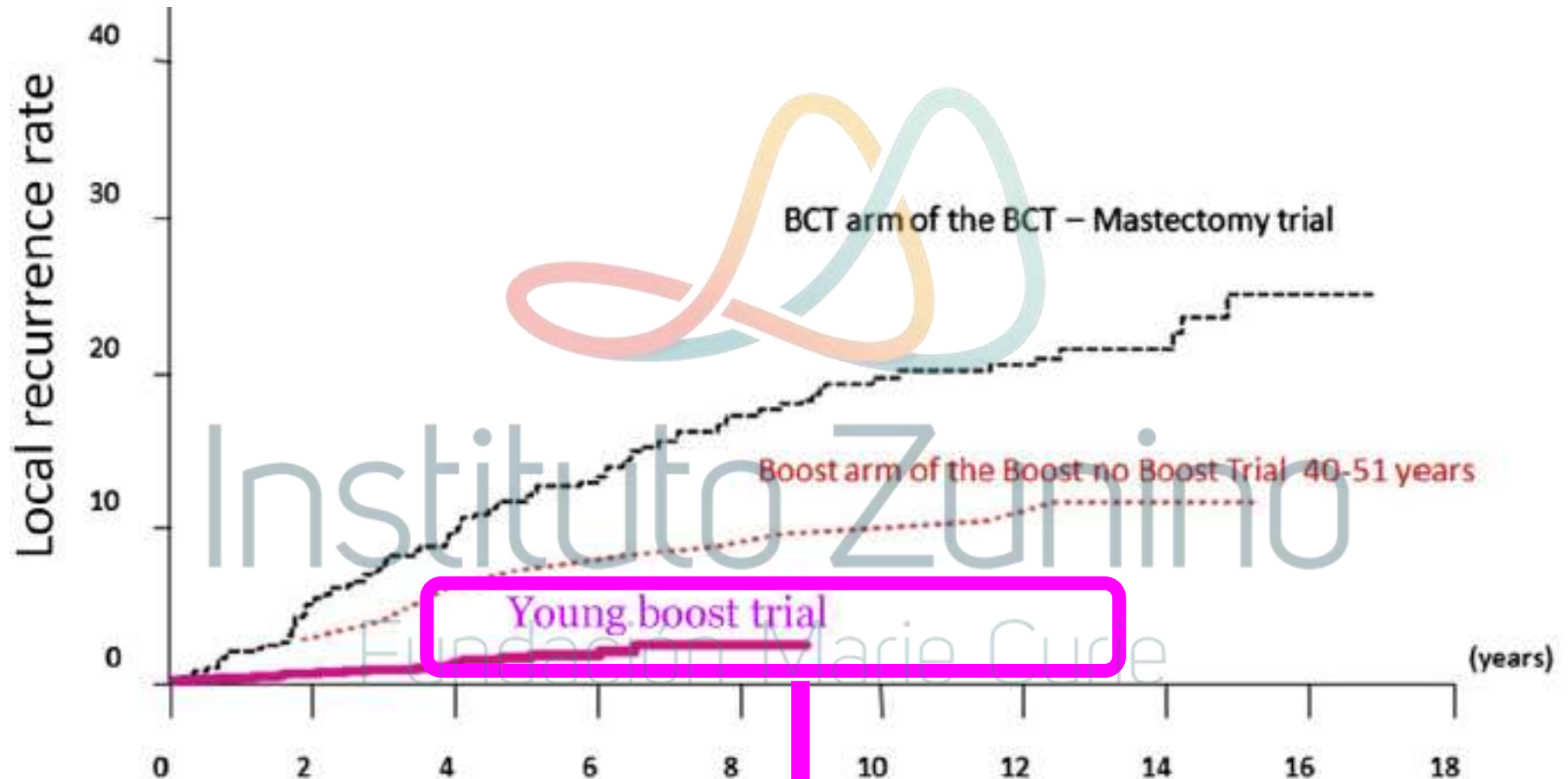
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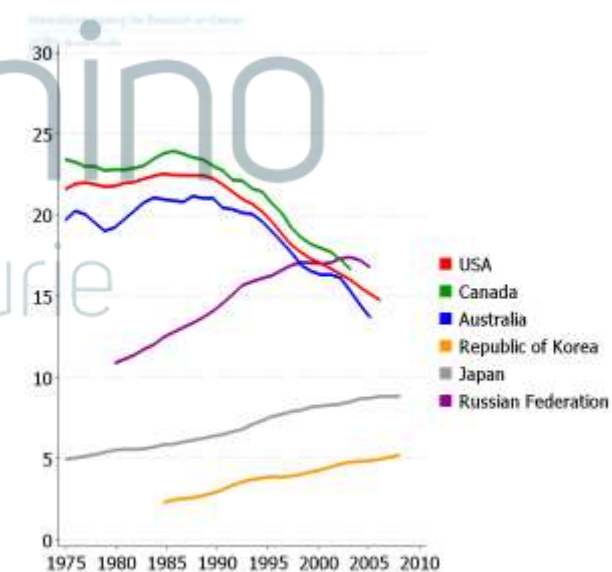
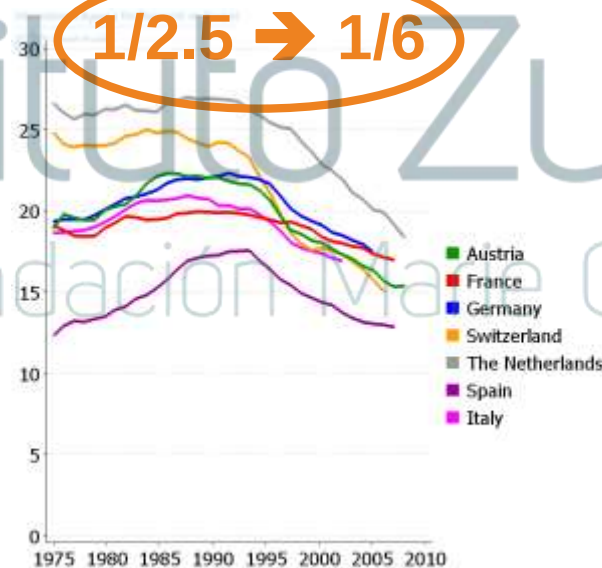
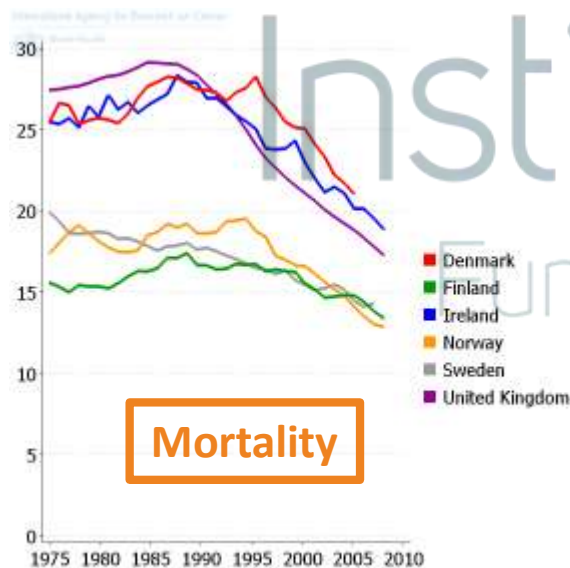
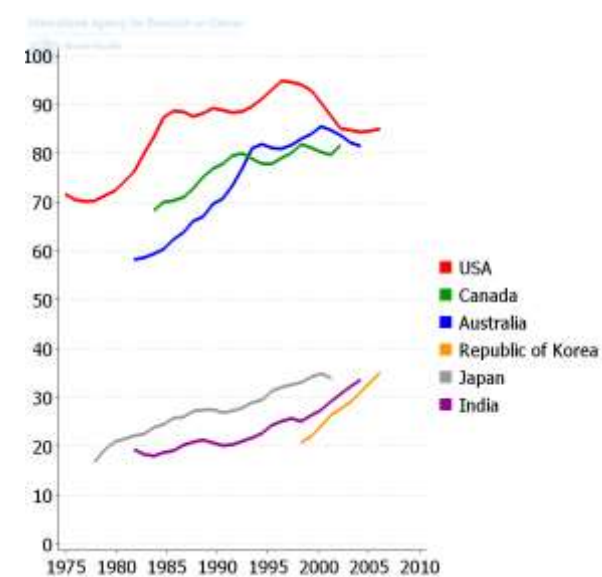
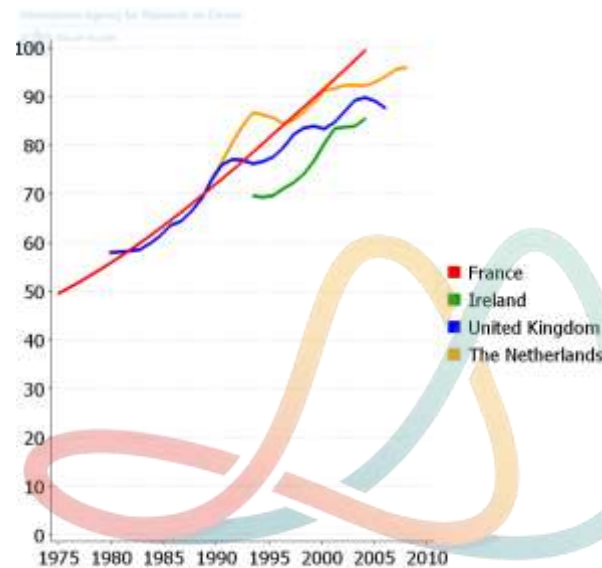
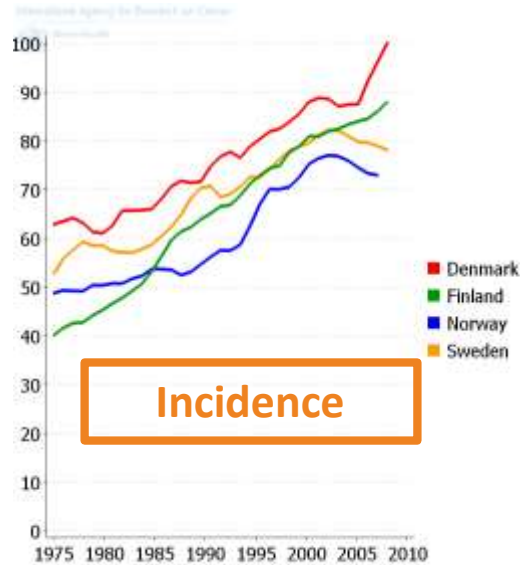
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Individualised patient care: *bright future*



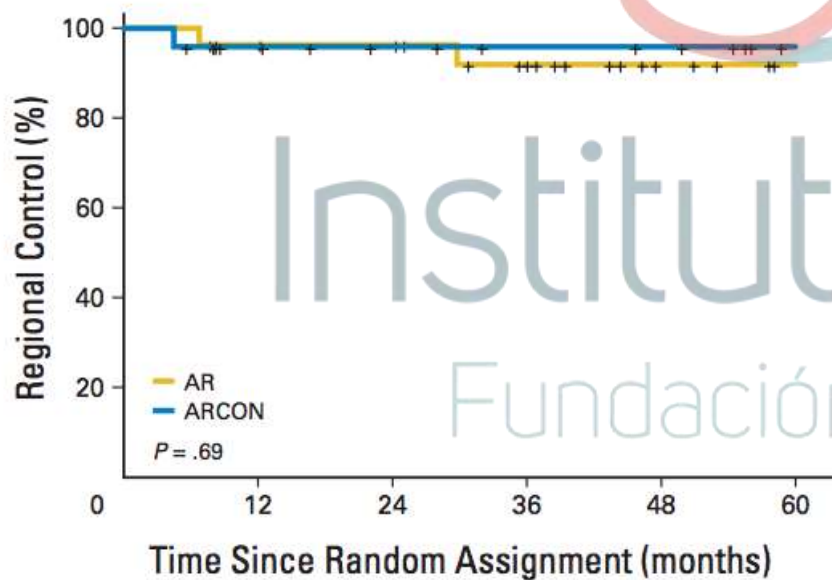
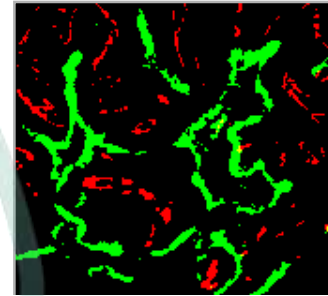
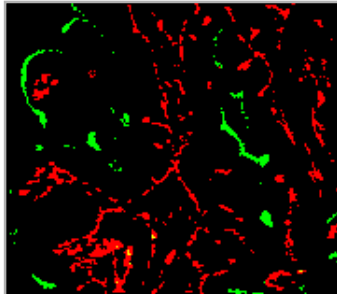
Update 2016: 1.8% LRR at 9 years !!!

Individualised patient care: *bright future*

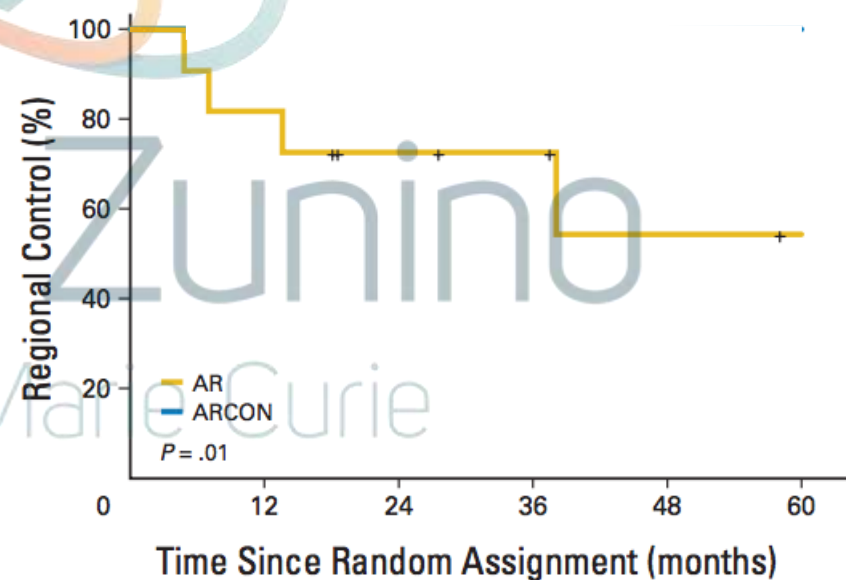


Individualised patient care: *bright future*

Tissue hypoxia & radiosensitivity: ARCON



No. at risk						
AR	28	26	25	19	12	8
ARCON	25	21	18	16	15	10

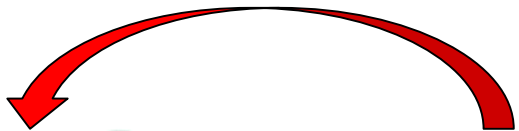


No. at risk						
AR	11	10	7	6	4	3
ARCON	15	14	9	8	4	4

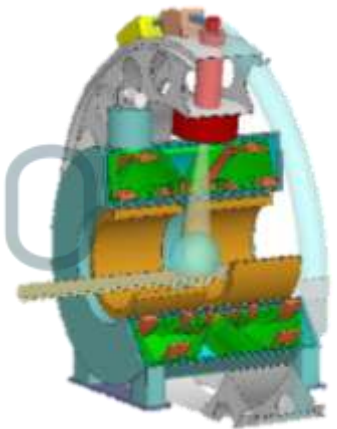
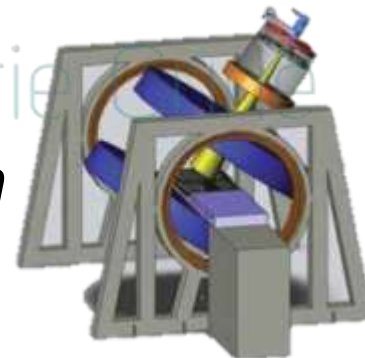
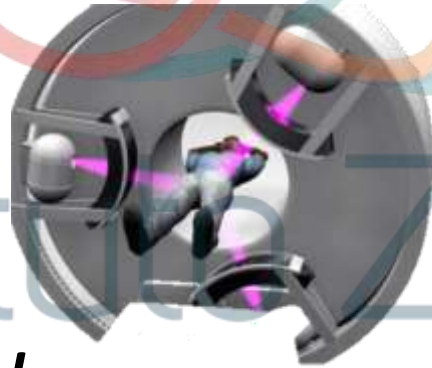
Individualised patient care: *bright future*

- *Margins*

- *IGRT*

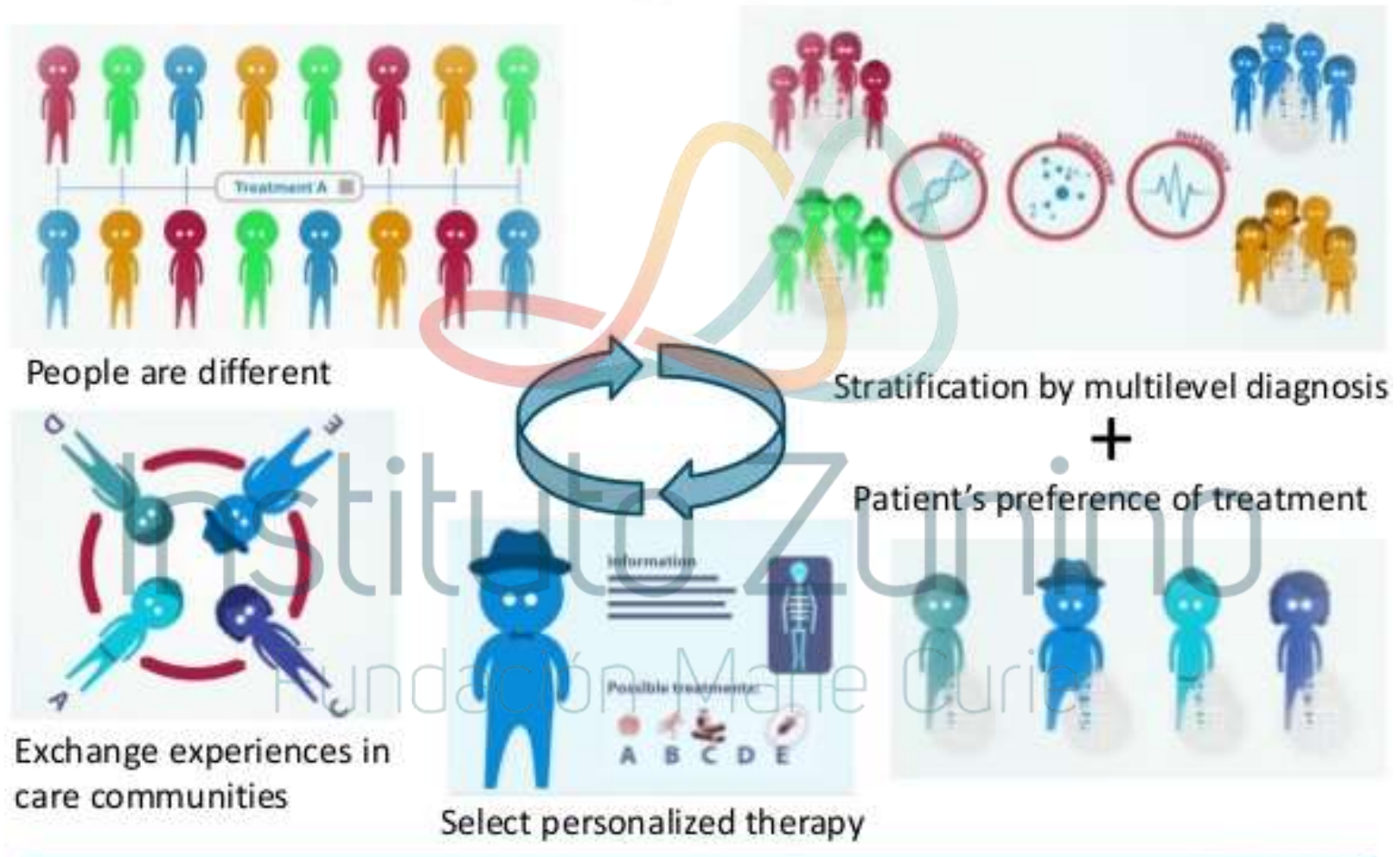
$$M = 2.5 \Sigma_{\text{tot}} + 1.64 (\sigma_{\text{tot}} - \sigma_p)$$


- *In-room MRI:*
 - *Morphological adaptation*
 - *Functional adaptation*



Individualised patient care: *bright future*

Personalized Healthcare @ Radboudumc



Individualised patient care: *bright future*

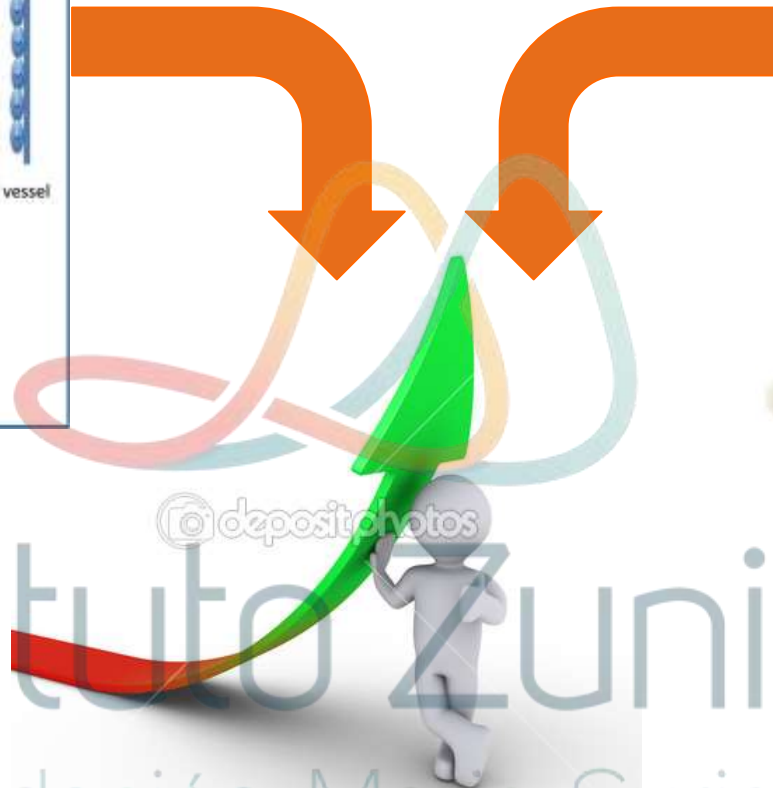
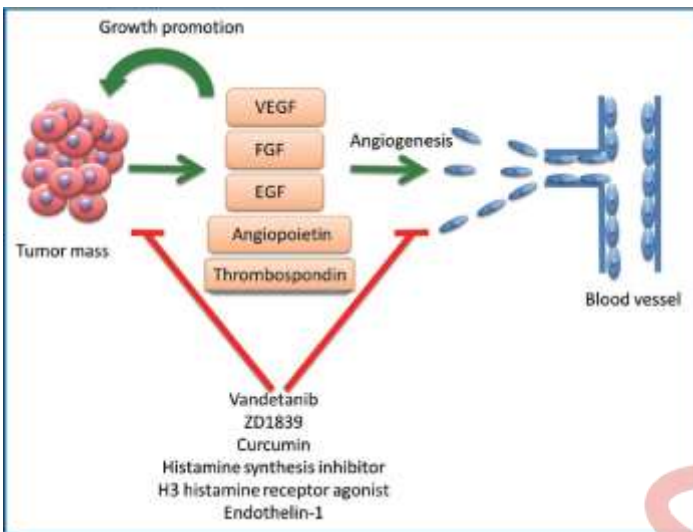
The medical universe



Challenges:

- Limited resources → competition with other diseases
- Own responsibility (life style)
- Right to choose
- Patient vs. population

Individualised patient care: *bright future*



Individualised patient care: *bright future*



Individualised patient care: *bright future*



Today: I am a radiation oncologist with breast cancer as primary interest!

Instituto Zunino

Fundación Marie Curie

Individualised patient care: *bright future*



Today: I am a radiation oncologist with breast cancer as primary interest!



Tomorrow: I am a breast cancer specialist with radiation oncology as tool

Individualised patient care: *final personal thoughts*



Individualised patient care: *acknowledgements*

The entire ESTRO & ECCO families.

All the colleagues I worked with.

All the patients I had the privilege to treat.

In fact: all of you who are active in the field of oncology in general and radiation oncology in particular!

For the first time in history...

“My degree was history. It's the first time I ever remember a current UK Prime Minister being frequently compared to Lord North (lost the United States in 1776) as potentially our worst ever. It's impressive in a way.”



